JUNE
1952

fueloil & oil heat

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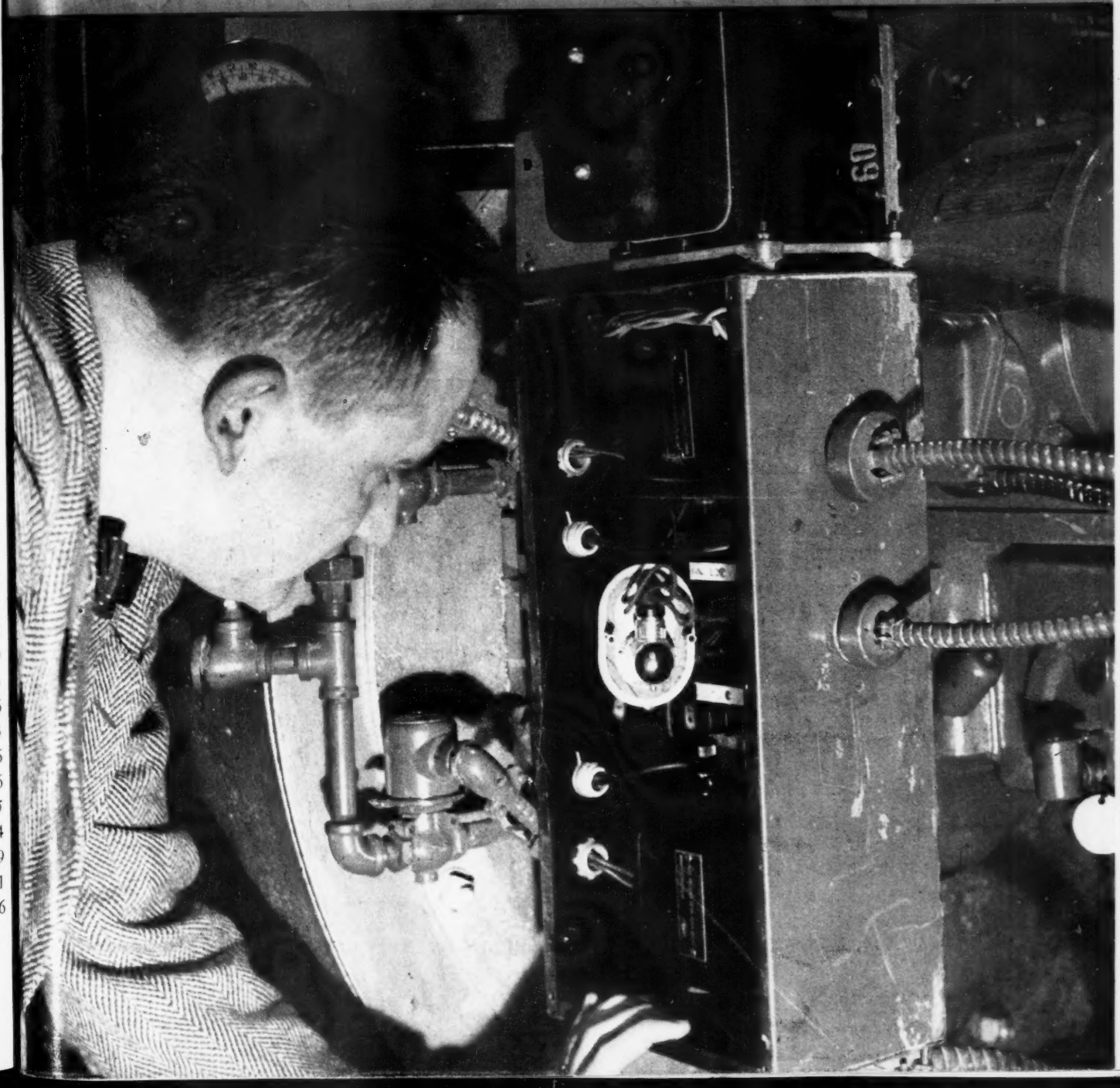
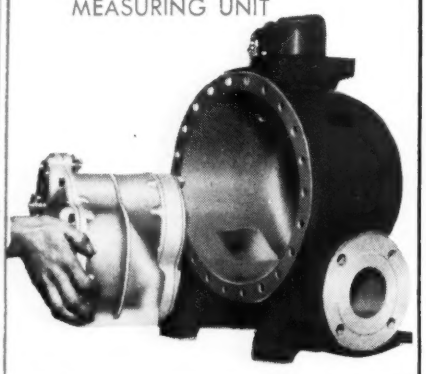
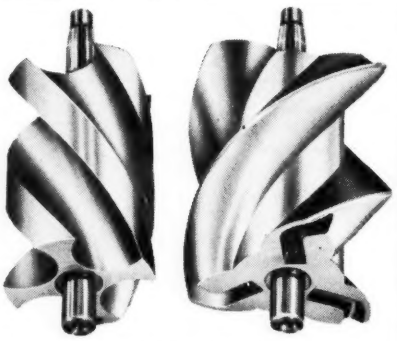


Only BRODIE *BiRotor* METERS offer all these advantages

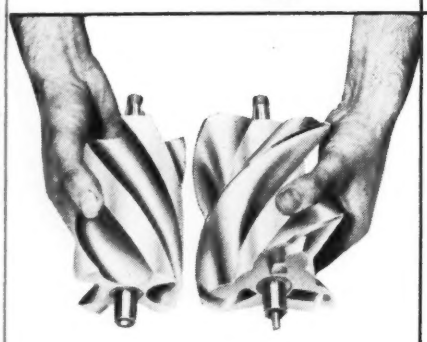
READILY REPLACEABLE MEASURING UNIT





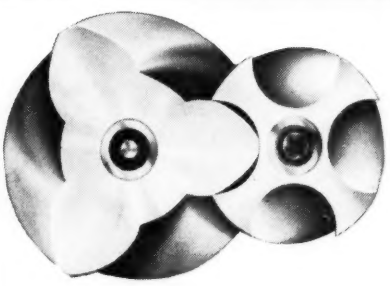
JUST TWO MOVING PARTS

PRECISION DRY ADJUSTMENT



NO METAL TO METAL CONTACT

WELDED ALL-STEEL HOUSING



SMOOTH ROTARY PERFORMANCE

It's what's inside that really counts

- Brodie BiRotor Meters are built from the inside out.
- Comprised of compact unit-built assemblies, they are completely interchangeable and fully self-contained.
- Compactness and accessibility permit periodic inspection and maintenance with minimum tie-up of facilities.
- After long continuous service, Brodie BiRotors show no measurable signs of wear.
- All this is made possible by the exclusive in-built performance features to be found only in Brodie BiRotor Meters. *Investigate fully today, write for complete details.*

BiRotor—the meter with the readily replaceable measuring unit

BRODIE ALL-STEEL BiRotor TRUE-ROTARY METERS

RALPH N. BRODIE CO., INC. • 61st & LOWELL STREETS, OAKLAND 8, CALIFORNIA, U.S.A.

Division Offices: 550 SO. COLUMBUS AVE., MT. VERNON, N. Y. • 59 E. VAN BUREN, CHICAGO 5, ILL. • 302 SO. PEARL STREET, DALLAS, TEXAS 221 9th AVE. N., SEATTLE 9, WASH. • 5401 E. SHEILA STREET, LOS ANGELES 22, CALIF. • *REPRESENTATIVES AND STOCKS IN ALL PRINCIPAL CITIES*

JUNE fueloil & oilheat 1952

VOLUME 11 NUMBER 6

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CANADIAN: $4.00

THIS ISSUE: $1.00

MEMBER CCA

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Among other things . . .

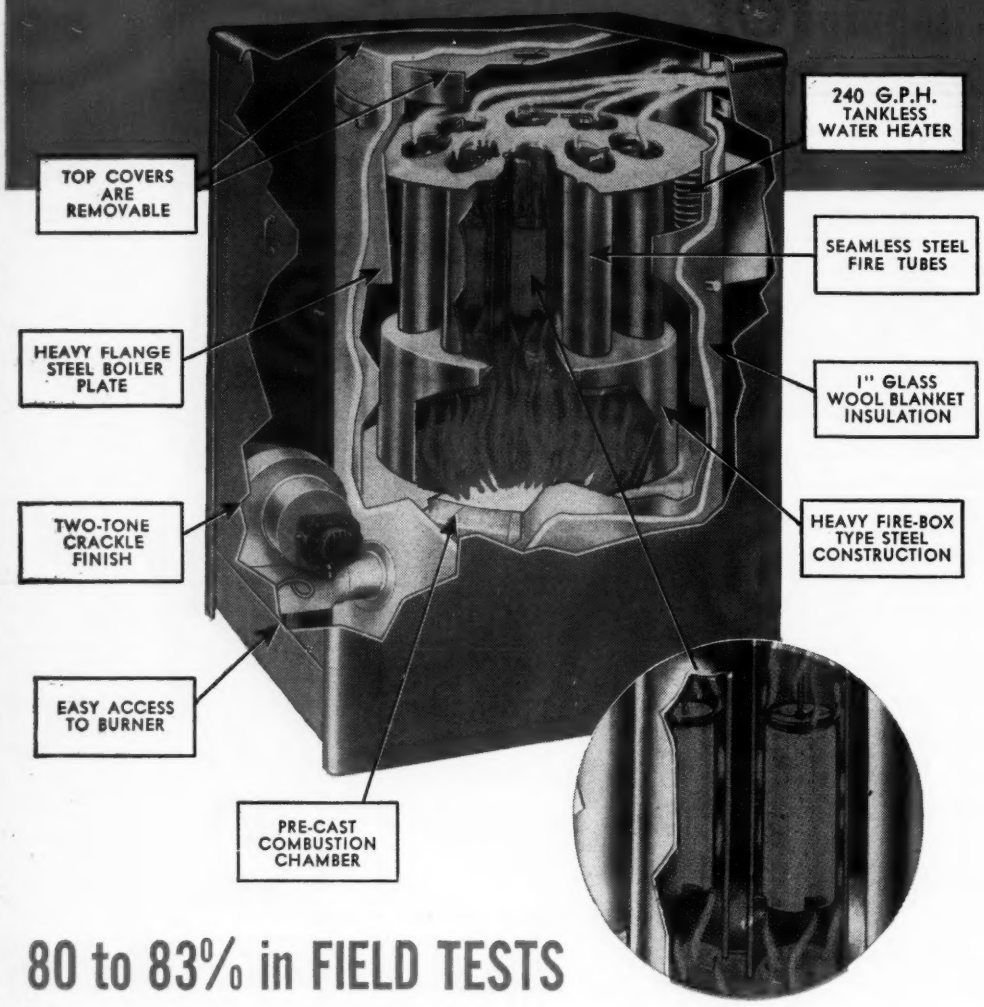
The editorial features begin with a description of a pension plan set up by the Charles L. Elliott Co., interesting because it covers 12 employees!

John Schulz' "Exam for service Men" in the April issue kicked up such lively interest that he takes a few of the many letters that resulted and replies on page 54.

OHI Distribution Division's Technical Committee next comes up with some sound ideas for 24 hour oil transport unloading, followed by Hancock Oil's clever local advertising and a description of Sav-A-Call oilburner "Self-service Trouble-shooting."

Then an up-to-date Catalogue of Oilburner Manufacturers—companies, addresses, officers and equipment—begins on page 66.

Higher Boiler Efficiency!

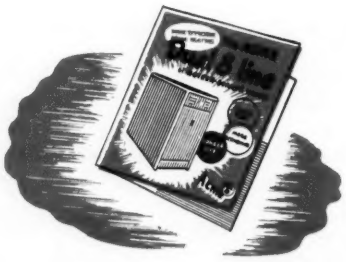

TOP COVERS ARE REMOVABLE
240 G.P.H. TANKLESS WATER HEATER
SEAMLESS STEEL FIRE TUBES
HEAVY FLANGE STEEL BOILER PLATE
1" GLASS WOOL BLANKET INSULATION
TWO-TONE CRACKLE FINISH
HEAVY FIRE-BOX TYPE STEEL CONSTRUCTION
EASY ACCESS TO BURNER
PRE-CAST COMBUSTION CHAMBER

80 to 83% in FIELD TESTS

*Patented stainless steel intensifier tubes exclusive with Acme, make the difference. They cut chimney heat loss; speed heat transfer from combustion chamber to boiler. Homeowners get faster heat and real fuel saving — two advantages that pay off for more winters, because every Acme Dual 8 is A.S.M.E Code Constructed of heavy welded steel. Its rated capacity is certified by the National Association of H. P. & A. C. Contractors. Result: contagious customer satisfaction . . . and more sales for you.

Acme Dual 8 is easy to install and service: the cabinet can be installed after all piping has been completed; all controls are on the front of the boiler; the intensifier tubes are readily accessible.

STAINLESS STEEL INTENSIFIER TUBES



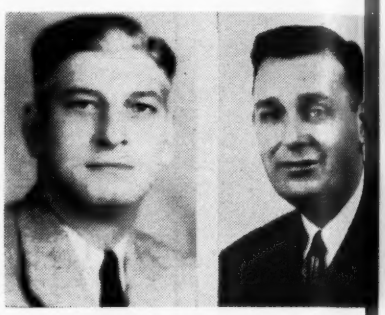
Write for the new folder illustrating the complete Acme line of boiler-burner units: Acme Heating Division, 1033 New Britain Ave., West Hartford, Conn.

*U.S. PAT. No. 2,560,275

Acme DUAL 8 High Efficiency BOILER-BURNER UNITS

ACME HEATING DIVISION • THE UNITED TOOL & DIE CO.

Names in the New



Dronsfield Kirk

Harry M. Dronsfield has b appointed factory representative Harvey-Whipple, Inc., Springfi Mass., covering Western New Y State and Western Pennsylva Dronsfield was previously a fact field representative for a large furn manufacturer for the past 15 ye *Frank P. Kirk* has rejoined the f organization of Harvey-Whipp where he will be factory represen tive for Wisconsin and the east fringe of Minnesota. Kirk had rep sented General Automatic in this a and previous to that was, for s eral years, factory representative Harvey-Whipple.

Henderson Supplee, Jr., has b elected president, The Atlantic Ref ing Co., succeeding Robert H. Colley who was elected chairman of the board. Supplee, as president, becomes chief executive officer of Atlantic. Supplee joined Atlantic in 1947 as vi president and general manager domestic sales. In 1948 he was elect to the board of Atlantic and in Ma 1949, was named executive vi president.

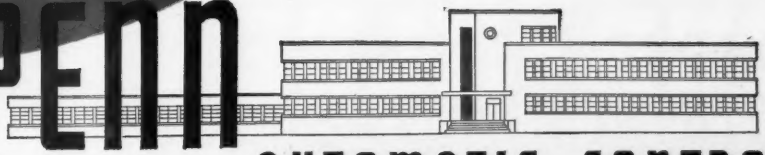
your heating prospects are fed up with HOT-n-COLD LIVING!

give them the comfort they want with automatic heat controlled by the PENN heat-anticipating thermostat

More and more dealers are doing just that . . . and they are learning it pays off in better-satisfied customers, more sales and higher net profits.

On your next heating job, try PENN controls. Remember . . . they are available for every type of heating system with every kind of fuel. Ask your burner manufacturer, wholesaler or write **Penn Controls, Inc., Goshen, Indiana.** Export Division: 13 E. 40th Street, New York 16, N. Y., U. S. A. In Canada: Penn Controls Limited, Toronto, Ontario.

Nationally Advertised in
BETTER HOMES & GARDENS
AMERICAN HOME
NEWSWEEK



PENN AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

At Last!

Fully Automatic WALL and FLOOR OIL FURNACES by KLEER-KLEEN

Just Set it... and Forget it! KLEER-KLEEN ELECTRIC IGNITION Does the Rest!

NO PILOT FLAME

Furnace lights itself — regulates itself

Yes . . . KLEER-KLEEN's new Electric Ignition ends all your old-fashioned pilot flame woes! Once the thermostatic controls are set . . . KLEER-KLEEN's Electric Ignition takes over to give you smooth, efficient operation under ALL conditions! That's what makes Kleer-Kleen America's finest furnace. Electric ignition burners are now available on all Kleer-Kleen models.

- **16 MODELS** to choose from. For every home and every budget.
- **Forced Air Circulation** guarantees proper distribution of warm air throughout the house.
- **Up to 100,000 BTU**

All Models and All Parts Thereof Are Listed by Underwriters' Laboratories, Inc.

Distributorships Available in Some Areas

KLEER-KLEEN

MANUFACTURING CO. OAKLAND, CALIFORNIA

America's Finest Furnaces

James S. Haskins has been appointed director of public relations, American Oil Co., N. Y., N. Y. Haskins, former national field operations supervisor for the Oil Industry Information Committee, American Petroleum Institute,

James S. Haskins *(right) confers with Herschel C. Smith, president of the American Oil Company, shortly after his appointment to the newly created position of director of public relations for the company.*

has over 20 years of professional public relations and newspaper experience in the Middle West and the East. He was with the *Detroit Free Press, Detroit News* and the Associated Press bureaus in Boston and Detroit, as well as being associated with Carl Byoir & Associates, Schenley Distillers Corp., Fred Eldean Organization and the API.

Harry Potter has joined Field Control Div., Mendota, Ill., as factory sales engineer. Previously, Potter for many years was associated with Balaban & Katz theatre chain in charge of building, equipping, staffing and preparation of new theatres in the Chicago area. Prior to that he was in charge of personnel training for Mandel Bros.

Paul B. Holmes resigned on April 30 as assistant director, Building Materials Division, Facilities and Construction Bureau, National Production Authority, and is returning to private industry. He has done so in

(*Please turn to page* 172)

Windmaster
Draft Control
PATENTED

Any way you look at the Windmaster Draft Control, you will see ways to save time and money . . . and make more net profit on every sale.

Cost per square inch is less—Competitively priced with ordinary draft controls, the Windmaster vane has up to 100% more relief capacity. For example, an 8" Windmaster can do twice the work of an 8" size in other makes.

Costs less to stock and fill orders—Each Windmaster is individually packed in an attractive, sturdy carton with size plainly marked on all sides.

Costs less to install—The Windmaster can be properly installed in three minutes. Calibrated balance can be accurately set in less than 3 seconds.

Reduces service call-backs—Easy to install properly. Control locks into adapter in permanent position. Calibrated balance can be quickly locked at manufacturer's draft specification. Continuous trouble-free, extra-efficient action.

Dealer demand is growing—More and more wise dealers are switching to the Windmaster which cuts installation time and gives more net profit per job. At the same time, leading manufacturers are shipping Windmaster Draft Controls with their units.

Profitable advertising and sales helps—To give your sales volume a boost, a wide variety of advertising and merchandising helps are available . . . backed by an effective program of national advertising.

Send today for the complete profit story on the Windmaster Draft Control, sold exclusively through leading jobbers.

Windmaster Corporation 899 Ingleside Avenue • Columbus 8, Ohio
Dept. C

Windmaster Draft Control

fueloil & oilheat

Editorial Leaks

THE JULY ISSUE OF FUELOIL & OIL HEAT will be its 30th Anniversary Number, looking back to July 1922 when the idea of an oilheating publication was first realized. Actually it was primarily a fueloil magazine at the start with house heating given very little mention in Volume I, Number I.

There will be some special features in the 30th Anniversary Issue, mostly of an historic or development nature, so that we can all take a fresh measure of satisfaction in the job our industry has done.

If you happen to have some anecdotes or interesting observations of the oilheating industry back in the Twenties perhaps you would send them to the editor to help make this issue particularly interesting and enlightening to our friends and yours.

❖

SO EARLY THIS SEASON we are getting threats again along the Atlantic Seaboard about facing another fueloil supply stringency or shortage next winter. This thing is getting chronic.

The *New York Times* had a full column one day in April and then the *Boston Globe* had one following the API meeting May 20th.

One major supplier in the East has told some of its fueloil distributors that they can have as much oil next season as they had last winter, adjusted to normal weather.

There is only one reason for threats to the public in the newspapers and threats to the marketers during the spring of the year . . . to hold down growth in fueloil demand by discouraging oilburner installations.

You can discuss the ethics of this procedure until you're blue in the face without stopping it.

There is no earthly reason why distillate heating oils need ever be scarce, barring of course a full-scale war. There is no shortage now or in the measurable future of either field production or of refining capacity for petroleum. Tanker rates have gone up during winter peaks but still there have always been enough of them to carry the oil if you pay the freight. So what can cause a shortage? Only one thing . . . lack of profitable price.

The oil industry itself is largely to blame for the fact that No. 2 oil prices in the East were frozen too low when OPS took over. They had tried to preserve an "historic differential" between heating oil and gasoline. This historic differential goes back to prewar days when no one thought much of fueloil for refinery profits.

Whenever in the course of supply and demand economics fueloil and gasoline got closer together than the historic differential in refinery price too many oil company men strove to get gasoline up rather than being willing to recognize that rising fueloil demand was forcing it to profits comparable with gasoline. We only had one year like that and then they pried them apart again.

No. 2 oil at Gulf Coast refineries, which supply the East, is frozen 3½¢ below house brand gasoline. To make them equally profitable the differential should be no more than 2¢ according to industry economists.

When the time comes—and it will come—that this gap is reduced to where it belongs the big suppliers will enthusiastically seek more business.

What a pleasant day that will be for oilheating men and the millions of consumers they serve. Imagine having field men for oil companies coming in to compete for your business again!

Everything considered, Eastern heating oil prices are too low. With rare exceptions heating with oil is considerably cheaper than with either gas or coal. Surely oilheating is at least as good as the other two.

The Department of Labor fuel cost reports show No. 2 oil prices in the larger East Coast cities to average 12.4¢. In the Midwest, where both natural gas and bituminous coal are often much cheaper than fueloil, the current average price of No. 2 in the large cities is 13.9¢. And oddly, the Midwest has been the fastest growing section of the country in oilburner installations. Not only that, but there's plenty of oil out there.

Some oilheating industry men seem to feel that there is some way we can just crack a whip and require the refiners to give us all the oil we want regardless of current prices. They point out that the oil companies are making big profits and can afford it. They are, but those record profits came from closely observing the profit motive, peculiar to American business.

There will apparently be some rise in fueloil prices this summer if present OPS thinking carries through, but it won't be enough to make heating oil attractive to refiners serving the East.

So look for more unfavorable publicity on supply, both in the newspapers to frighten the public and in restrictions on the marketers . . . until the day when prices reach a full two cents above the present level.

We may not want them that high, but a lot of good fueloil distributors believe that it's better to move up to the necessary level and have the refiners enthusiastically promoting the business than to drag along under wraps as we are now. If the oil industry hopes to preserve the free enterprise system that it so often talks about, it can't do it by restricting its marketers.

Let's do what it takes to get the necessary price level approved, take off our shackles and get going again. True, burner sales are up but not like they could be in an enthusiastic market.

❖

LAUNCHING THE FIRST committee strictly for fueloil in the history of the American Petroleum Institute, the Boston meeting of the Institute's Marketing Div. was a milepost for our group.

Headed by Jack Minner of Shell, the Fueloil Subcommittee of the Marketing Services Committee has laid plans for two quite ambitious studies.

The first will explore the true costs and consumer advantages of drop size differentials for heating oil. Today 40% of marketers use them; 60% don't. The second will look into the costs, advantages and disadvantages of increasing local bulk storage.

Now is the time for "LC" ACTION!

- LC To get 100% contract renewal among present oil customers.
- LC To convert "call in" customers to "keep full" service.
- LC To win new customers from competition (whatever type) through better service.
- LC To cut back mounting delivery costs.

What is "LC" ACTION?

"LC" is the model of VENTALARM Whistling Tank Fill Signal which allows quick installation in vent pipes of tanks that are already in use. Easy to do because "LC" incorporates a compression fitting in its top (no threading). "LC" ACTION simply stands for the following moves on your part.

1. Installing "LC" VENTALARM Signals on *all* old-customer tanks . . . those you now serve.
2. Offering Model "LC" to other householders in your territory who have yet to know the cleanliness and convenience of VENTALARM Signal fuel oil delivery.

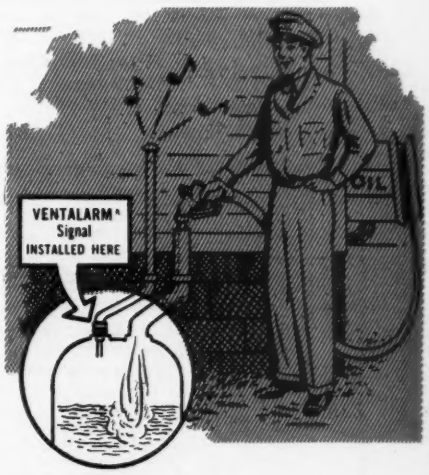
This is how "LC" ACTION pays off—

for Your Customers —

1. Eliminates damaging spills.
2. Prevents tank "weeping" and resultant oil odors.
3. Eliminates run-outs.
4. Makes oil delivery truly automatic.
5. Maintains the privacy of the home.

for YOU —

1. Eliminates customer delivery complaints.
2. Tells you exactly when tanks are properly full.
3. Saves up to 30% of driver and truck time.
4. Pays for itself during the first season.
5. Provides for clean, convenient delivery that can compete with any other type of fuel delivery.



Over 4000 Fuel Oil Dealers throughout the country have taken "LC" ACTION. Each is doing better today because of it.

SCULLY SIGNAL COMPANY

76 First Street, Cambridge 41, Mass.

Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario

Aids for "LC" ACTION

COLORFUL FOLDERS ready for your use as mailing enclosures. Tell complete story to your customers as to benefits you give them by equipping their fuel tanks with the Whistling VENTALARM Signal.

VENTALARM INSURANCE POLICY

For distribution with VENTALARM Signal installation. Educates and impresses; binds customer closer.

SAMPLE LETTERS for use when offering new type VENTALARM Oil Delivery. Proven customer good-will builders.

Fuel Oil Company pamphlets and sample customer mailings sent immediately upon request. Customer mailing folders available at less than $10 per 1000 copies.

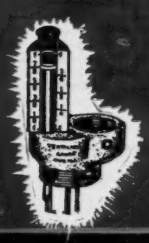
Contact your REGULAR SUPPLY HOUSE for VENTALARM Signal in a variety of sizes . . . and other Scully Fuel Oil Delivery Aids.

All Scully Products are manufactured under U. S. & Foreign patents or patents pending.

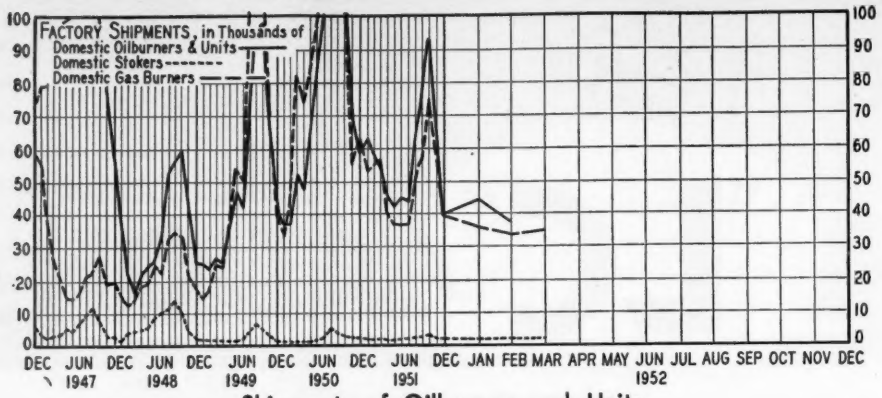
VENTALARM® SIGNAL
Whistling Tank Fill Signal

SCULLY® TANK GAUGE
Easy-to-See Gauge Simple, Sturdy, Economical

VENTALARM® TANK GAUGE
Combination Audible Signal and Visible Gauge



FASFILL® CONNECTOR
Portable connection for gun and fill pipes of all sizes.

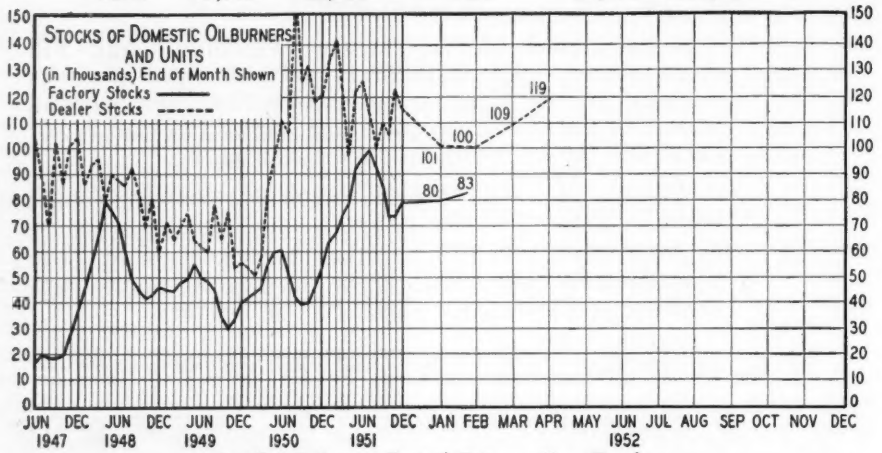

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
Domestic Gas Burners
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 147 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	FEBRUARY			TWO MONTHS		
	1952	1951	Percent Change	1952	1951	Percent Change
Conversion	26,310	40,653	— 35.2	58,382	85,313	— 31.5
Boiler Units	2,310	5,653	— 5.9	5,382	11,947	— 54.9
Furnace Units	8,667	12,332	— 29.7	19,162	25,218	— 24.0
All Domestic	37,287	58,638	— 36.4	82,926	122,478	— 32.3
Commercial	2,492	3,650	— 3.1	5,006	7,566	— 33.8
Total	39,779	62,288	— 36.1	87,932	130,044	— 32.4


STOCKS OF DOMESTIC OILBURNERS AND UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
101
80
83
100
109
119
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

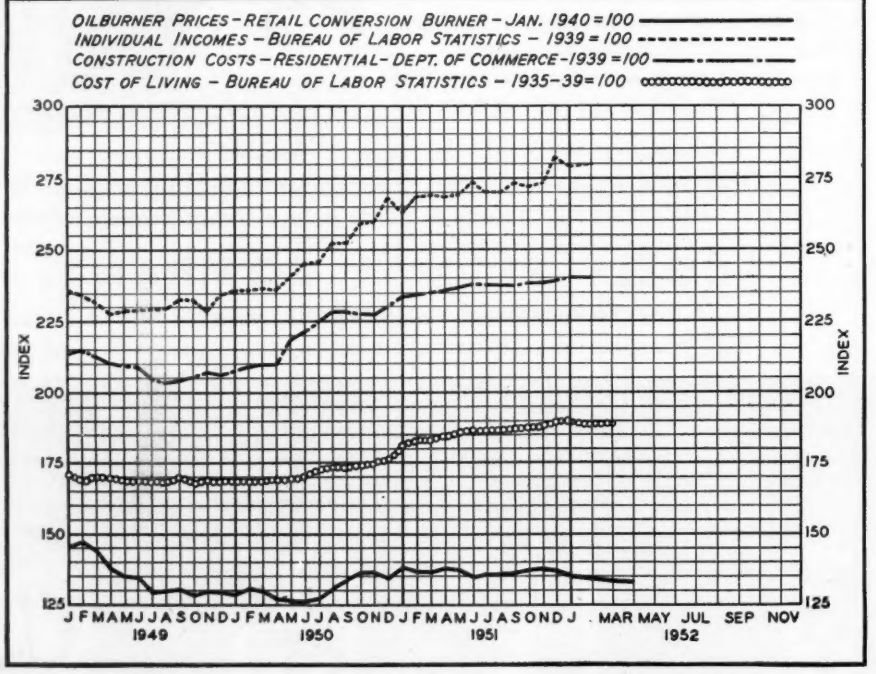
April Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
April Aver.	$329	$700	$642
March Aver.	329	693	631

Price Index: Conversion Burners: January 1940 is 100%

	WHOLESALE				RETAIL		
April	141.1	Six months ago	137.8	April	132.9	Six months ago	136.6
March	142.3	Year ago	137.2	March	132.9	Year ago	138.1

OILBURNER PRICES COMPARED TO GENERAL INDEXES


OILBURNER PRICES - RETAIL CONVERSION BURNER - JAN. 1940 = 100
INDIVIDUAL INCOMES - BUREAU OF LABOR STATISTICS - 1939 = 100
CONSTRUCTION COSTS - RESIDENTIAL - DEPT. OF COMMERCE - 1939 = 100
COST OF LIVING - BUREAU OF LABOR STATISTICS - 1935-39 = 100
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1949 1950 1951 1952

Oilheating Trends

APRIL did a nice comeback on oilburner installations, showing a rise of 15% over the previous year. March had been down 9%. Estimated installations of domestic oilburners and units in April were 45,175 compared with 39,250 in April 1951. This brings the total for the first four months to 154,723 compared with 139,489, a rise of 11%.

April installations were divided: New homes 13,632; Replacements of old oilburners 5,915; Conversions from other fuels 25,628.

Some New England dealers, believing that our installation estimates are running too high, were wondering if new home sales were taking a larger share of the total. Actually they are not since the 43,427 estimated new home installations in the first four months represent only 28% of the total while last year in the same period new home installations accounted for 29%.

BURNER STOCKS: Stocks of domestic oilburners and units in dealer hands on May 1 were approximately 118,966, a significant rise from the 108,976 a month earlier and even more than that above the figure of May 1, 1951 when they stood at 96,255. Early in the year stocks were going down; now they are headed back up. The May 1 stocks were divided: Conversion burners 74,041; Boiler-burner units 21,067; Furace-burner units 23,858.

TANK STOCKS: On May 1 dealers were carrying approximately 131,138 customer oil tanks in stock, a significant rise from 108,757 the previous month, but they were a little below the 138,013 of May 1, 1951.

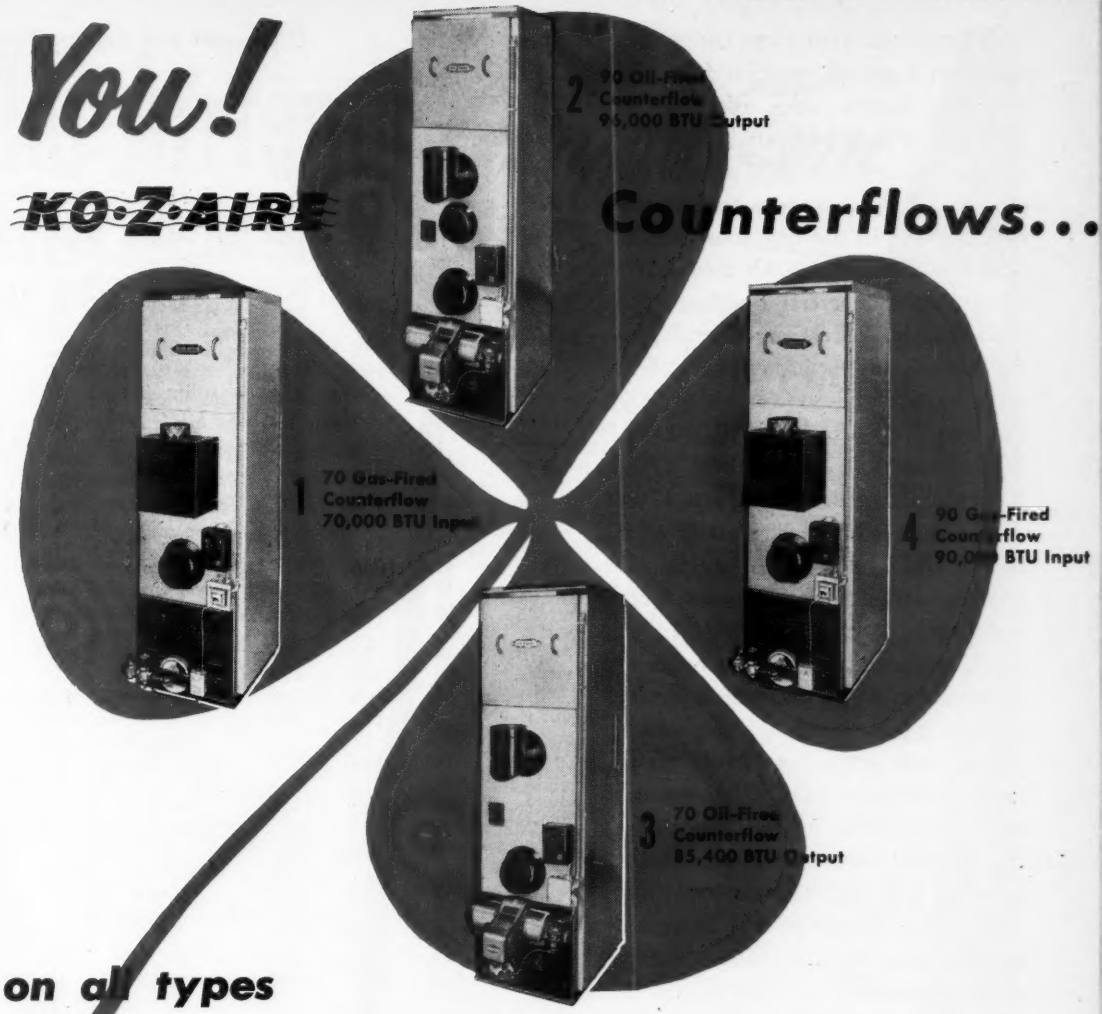
By sizes the tanks on May 1 were divided: 220-275 gallon 123,705; sizes 550-675 gallon 4,187; sizes 1000 gallons or larger 3,246.

Tank prices continue to drop indicating that the manufacturers are worried about their own stocks. The national average dealer cost on May 1 for a 275 tank was $36 compared with $38 the previous month and with $44 on the same date a year ago.

By sections the May 1 prices this year were: New England $31; Mid-Atlantic $38; Midwest $32; Pacific Northwest $44.

Lucky You!

These 4 KO-Z-AIRE Counterflows...



let you in on all types of perimeter heating installations

YOU can literally "set yourself free" from fuel restrictions, sales objections and service problems with these 4 KO-Z-AIRE Counterflow units. For thanks to KO-Z-AIRE you can now sell and satisfy the booming market of basementless homes requiring perimeter and crawl space heating. Here's why:

In the KO-Z-AIRE Counterflows, there are both gas and oil fired models available, and both can be converted from one fuel to the other. Complete safety is assured, too, as KO-Z-AIRE Gas Counterflows are Tested and Approved for Safety and Efficiency by AGA. Most models are also listed by Underwriters Laboratories for "Zero Inches Clearance." Unusually compact and quiet, these KO-Z-AIRE Counterflows may be installed in alcoves, utility rooms or space saving closets taking advantage of the "Zero Clearance" approvals. Cabinets are beautifully finished in metallic baked enamel.

There's a big profit in KO-Z-AIRE Counterflows for dealers who ride this great trend to perimeter heating . . . for it's a big, BIG market! Send coupon below for details about these Counterflows and our complete line of winter air conditioners and warm air furnaces.

For complete information on new KO-Z-AIRE Counterflow units and profit potential of a KO-Z-AIRE franchise, mail coupon at right. No obligation. Distributor Inquiries Invited

KO-Z-AIRE PRODUCTS, INC. ®

RED OAK, IOWA

Representatives in Principal Cities

mail coupon today

KO-Z-AIRE PRODUCTS, INC., Red Oak, Iowa, Dept. FO-6

Please send us details on

- ☐ KO-Z-AIRE Counterflows
- ☐ KO-Z-AIRE complete line of Oil and Gas Equipment
- ☐ Have your factory representative call

NAME _____ TITLE _____

FIRM _____

CITY _____ STATE _____

KP-52-2

HORIZONTAL OILBURNER UNITS: To check on a special question from the industry, dealers were asked about their sales of these horizontal units. The returns indicate that total sales in the country of these units with pressure type burners in the first four months of this year were 2,469. Of these 2,207 went into commercial buildings and the remaining 262 were residential installations. A break-down of these units by capacities shows: under 100,000 Btu. 30%; sizes 100-150,000 Btu. 36%; from 150-200,000 Btu. 17%; the remainder, over 200,000 Btu. 17%.

The dealers were then asked what they found in the way of special objections to these horizontal units. Only one-fourth of the reporting dealers stated any objections and the majority of these had to do with the difficulty in servicing them from a stepladder. There were some complaints about units having too small chimneys and some feeling that on the larger sizes there should always be a man on the premises who understands something about them. However, it is important to notice that the total volume of complaints was small and these mostly related to servicing difficulties on a unit up in the air.

PARTS INVENTORY: The question was asked last month by one of the reporting dealers as to how other dealers handle the parts inventory in their monthly financial statements. Passing this question out to the reporting group we find that 33% of them simply guess at the inventory each month and then make an actual count once a year; another 33% use perpetual inventories through stockroom control; another group of 28% depends only on the tickets turned in by the servicemen; the remaining 16% uses quite a variety of other methods. Typical of these are . . . monthly physical inventory . . . physical inventory every four months as a check against the stockroom perpetual inventory . . . physical inventory every three months to check the servicemen's tickets . . . a weekly check of the principal items . . . partial inventory (principal items) once a month. With inventories running as high as they are these days it does seem desirable to have a complete count at least twice a year.

Oilburner* and Building Permits

OILBURNERS					DWELLINGS			
April		4 MONTHS			April		4 MONTHS	
1952	1951	1952	1951		1952	1951	1952	1951
50	49	111	226	Albany, N. Y.	..	..	..	..
136	205	539	971	Baltimore, Md.	317	436	1450	1759
..	..	..	..	Binghamton, N. Y.	11	12	35	24
..	..	..	..	Bloomfield, N. J.	7	8	21	21
..	276	..	1809	Boston, Mass.	37	31	128	90
..	46	..	296	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	49	56	190	198
76	8	262	10	Columbus, O.	..	..	..	..
..	..	..	..	Des Moines, Ia.	83	92	210	270
493	210	2852	990	Detroit, Mich.	345	687	1446	2724
28	42	105	138	Elizabeth, N. J.	12	1	24	25
24	18	134	116	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	33	39	103	151
..	..	..	..	Hackensack, N. J.	..	21	..	29
..	127	..	819	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
57	40	100	90	Irvington, N. J.	5	7	10	17
..	..	..	..	Lynn, Mass.	32	6	70	35
28	7	145	140	Meriden, Conn.	..	..	..	..
345	49	1006	279	Milwaukee, Wisc.	265	395	795	834
62	41	445	226	Minneapolis, Minn.	137	204	300	422
23	15	71	61	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	13	1	27	4
18	24	73	77	Mt. Vernon, N. Y.	..	..	..	..
176	148	445	433	Newark, N. J.	..	..	..	..
101	64	506	248	New Bedford, Mass.	..	..	..	..
41	30	253	162	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
55	59	118	173	New Rochelle, N. Y.	23	10	87	47
..	1856	..	7611	New York City (total)	..	..	..	..
..	1361	..	5759	Brooklyn-Queens	..	..	..	..
474	495	2074	1852	Manhattan, Bronx, Rchd	..	..	..	..
59	159	197	544	Norfolk, Va.	186	67	604	301
..	..	..	..	Oakland, Calif.	..	..	..	..
99	35	251	205	Omaha, Neb.	..	127	..	285
15	22	47	52	Orange, N. J.	2	4	5	22
23	18	66	50	Passaic, N. J.	..	..	..	..
71	57	149	149	Paterson, N. J.	35	22	68	64
595	526	2296	2635	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	19	14	62	62
16	39	94	184	Portland, Me.	23	25	41	49
342	390	1276	1209	Portland, Oreg.	161	151	472	588
13	11	48	47	Poughkeepsie, N. Y.	..	..	..	..
106	38	408	246	Providence, R. I.	23	20	56	86
..	..	..	..	Reading, Pa.	2	7	18	33
29	32	171	303	Richmond, Va.	99	47	231	295
32	27	149	141	Roanoke, Va.	..	..	..	..
207	154	749	565	Rochester, N. Y.	..	..	..	..
..	17	..	84	Rockville Center, N. Y.	..	8	..	34
16	24	106	97	Salem, Mass.	11	13	19	26
..	110	..	292	St. Louis, Mo.	54	53	149	192
33	51	153	256	St. Paul, Minn.	141	126	376	318
29	72	167	284	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	189	204	676	726
..	..	..	..	Springfield, Mass.	76	54	307	179
83	67	244	279	Stamford, Conn.	..	..	..	..
5	5	29	21	Syracuse, N. Y.	57	31	140	90
..	..	..	..	Trenton, N. J.	28	3	49	17
..	..	..	..	Utica, N. Y.	21	19	40	51
103	43	360	318	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	25	21	103	84
20	25	68	79	White Plains, N. Y.	6	8	43	41
..	75	..	277	Wilmington, Del.	10	11	44	113
84	65	434	440	Worcester, Mass.	..	..	..	..
33	49	206	164	Yonkers, N. Y.	..	..	..	..
3726	2918	14833	12608	*Totals*	2537	2885	8399	9964
+12.7		+11.7		*Percent Change*	—12.0		—15.7	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

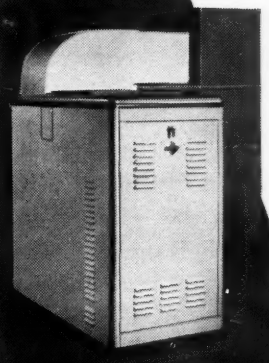
FUELOIL DELIVERY RANGE: Among all reporting fueloil distributors the national average shows that their trucks work within a 14 mile radius from their bulk plants. There are some variations by sections. In New England the average is 11 miles; in Mid-Atlantic states it is 14; in the Midwest and Pacific Northwest we find a 15 mile radius as the average. The interesting figure in this connection, and one never previously checked in our studies, is the concentration of ac-

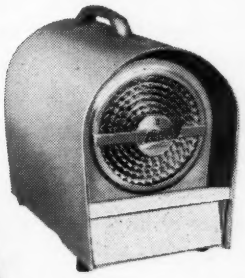
(*Please turn to page* 174)

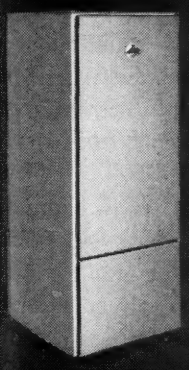
Chrysler Airtemp *Comfort Zone*

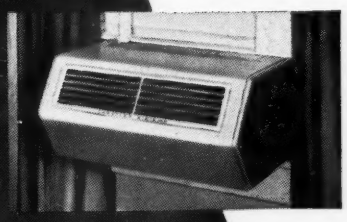
BETTER BUSINESS BUILDER FOR YOU

Look over these ten points for profit. You'll readily see why the Chrysler Airtemp Comfort Zone is a big business builder for dealers. With Chrysler Airtemp's complete line of all year products — heating, air conditioning and refrigeration—every businessman, every homeowner is a red hot prospect. Fill in the coupon today and let us send you complete details on how you can get in the Chrysler Airtemp Comfort Zone as an authorized dealer.







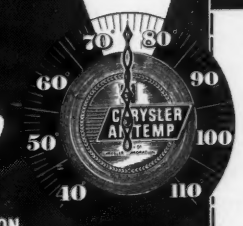


Check THESE TEN POINTS FOR PROFIT

1. Chrysler Airtemp—a recognized name and a division of a famous, nationally-known manufacturer, Chrysler Corporation—provides an unequalled engineering background.
2. All Chrysler Airtemp products are sold through factory-appointed Chrysler Airtemp dealers and distributors.
3. Chrysler Airtemp dealers are appointed on the basis of local market opportunities.
4. Chrysler Airtemp products cover three basic markets—residential, commercial and industrial.
5. Chrysler Airtemp engineered and pioneered the original "Packaged" Air Conditioner and developed the first Year-'Round air conditioning (combination heating *and* cooling) system for the home. The cooling unit alone can be added to any forced warm air furnace.
6. Chrysler Airtemp offers dealers a wide range of capacities in warm air furnaces for gas and oil—cooling units, from ¾ HP to 100 HP—air filters and dehumidifiers.
7. Chrysler Airtemp sales programs are designed to capture both new and replacement markets, plus service revenue.
8. Chrysler Airtemp maintains 15 Regional Sales Offices, a corps of field engineers and experienced district representatives to help the dealer.
9. Chrysler Airtemp national advertising has developed, over the years, a great public acceptance and demand for Chrysler Airtemp products.
10. Chrysler Airtemp cooperative advertising plans and sales campaigns provide real, hard-hitting dealer helps at the local level.

*COMPLETE FIVE-YEAR WARRANTY

Sealed Radial Compressor units in Chrysler Airtemp "Packaged" Air Conditioners carry an optional five-year warranty, through dealers. This warranty covers compressor replacement, freight to and from the factory, plus a labor allowance for removing and installing compressor assemblies.



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Airtemp Division, Chrysler Corporation FO&OH 6-52
Dayton 1, Ohio

Send immediately full details about Chrysler Airtemp's dealer arrangements without obligations.

Name_____

Address_____ Phone_____

City_____ Zone____ State_____

Government Influences on Fuels

by
Milburn Petty

WASHINGTON — The Petroleum Administration for Defense hopes to have industry working committees ready to help deal with any fuel oil supply pinch that may develop.

Plans for such committees—headed by industry men—were "cleared" by Acting Attorney General Perlman to gather facts and make recommendations for handling supply problems.

The order made no mention of the strike. But that was the lever Secretary Chapman used on Perlman.

In addition, PAD was authorized to appoint supply directors in each area who would be either federal, state or local government officials.

It was a victory for PAD which had been trying for nearly a year to get an OK to establish such fact-finding committees. But oil antitrust lawyers in Department of Justice successfully resisted pressure from PAD—even in the face of a fuel oil shortage threat last winter.

How PAD's Plan Would Operate

Here are the duties of such committees, as spelled out in PAD's program (which never was put into effect because the oil strike was settled):

Gather facts about petroleum supply including crude inventories; products stocks at all levels; current rates and methods of movement to consumption points and the reasons for any interruptions in the flow; specific area shortages; supplies needed for essential users; and make suggestions for meeting shortages and increasing supplies in specific areas.

DJ Warns on Plan's "Misuse"

Perlman's "no objection" letter to Chapman attempted to limit DJ's clearance to the strike-caused shortages. Even so, PAD officials were satisfied because the principle of working committees had been approved.

This set a precedent even though PAD did not find it necessary this time to set up supply committees.

Some oil company lawyers, mindful of the Madison Oil Case which was based upon charges that industry committees exceeded authority given them in a letter from a government official, may insist that DJ give specific clearance each time that the working-committee plan is invoked.

Perlman's letter warned that if these committees were "used to accomplish unlawful private ends," the DJ retained complete freedom to institute civil or criminal proceedings.

What bothers some Madison-minded oil lawyers is that the DJ would be the sole judge of what was a "misuse" of the PAD's program.

PAD Backs Higher Fuel Oil Prices

PAD officials estimate that the strike "cost" about 50,000,000 barrels of refinery runs. They are hopeful that much of this can be made up by near-capacity operations from now on.

Oil economics is the big hurdle. Can summer motor travel absorb the gasoline that will have to be made?

PAD is backing higher ceilings on distillate fuels for the Gulf and East Coast to encourage higher yields and offset the transportation cost increase.

The OPS fuels division has recommended increases that figure out to 1.2¢ on No. 2 oil at New York, for example. Whether this will be finally OK'd, remains to be seen.

Coal May Back Residual Hike

Coal mine operators are worried by reports that John L. Lewis plans to seek a wage increase of at least $1 per day for his union members.

They fear that this will mean further loss of markets to residual—unless the price of heavy fuel oil goes up at the same time that coal advances to reflect higher wages. (Coal is now selling way below its ceiling.)

So, it would not be too surprising if the coal people asked the White House to allow higher ceilings on residual.

Adding to the woes of the coal operators is the possibility that renegotiation of the Venezuelan trade agreement may mean a lowering of the tariff on all residual entering the U. S.

At present, the import tax is 10.5¢ per barrel (half cent a gallon) on imports up to an amount equal to 5% of last year's refinery runs, after which the rate jumps to 21¢.

One compromise plan that U. S. negotiators took with them to Caracas was that the rate should be 5.25¢ on oils of less than 25 gravity (which would include residual) and 10.5¢ on lighter oils with no quota restrictions.

PAD Warns on Gas Expansion

The gas industry "lucked out" last winter because of favorable conditions. Had there been colder-than-normal weather, with peak day at the week-end and near the season's end, there would have been "a serious loss of defense output and extensive and dangerous shortage of residential service over large areas."

Such was the gist of the warning issued by O. W. Morton, PAD's gas operations director, against "erroneous conclusions" from the gas industry's experience last winter.

True, supply is up in some areas—but demands have increased, too.

Morton believes that natural gas sales in general "will never again be conducted in a market of uncontrolled house-heating expansion."

Office of Price Stabilization has given some relief to distributors—not retailers—of liquefied petroleum gases who have had to go farther and pay more for their supplies.

Plan is to allow, as an addition to the CPR 17 ceilings, an increase amounting to the difference between the average laid-down cost for the three months ended Jan. 31, 1952, and the three months ended Jan. 31, 1951, or the average for all of 1950.

Diesel Tax Rule Change Urged

Industry tax attorneys have requested that the Bureau of Internal Revenue, in its forthcoming formal regulations on the 2¢ federal diesel fuel tax made it clear that the tax applies to *sales* only when the fuel is delivered into the fuel supply tank of a diesel-powered highway vehicle and to *use* only when withdrawn from the purchaser's storage facilities directly into such vehicle tank.

Under informal rules, at present, the bureau requires the "multi-purpose user" to estimate the percentage of his taxable use and pay the federal tax on the basis of such estimate.

fueloil & oilheat

Pensions for small Company

New England fueloil Distributor sets up Trust for 12 Employees

by
Robert Gray

THE WOODS ARE full of pension plans these days. The so-called "fringe" benefits in labor contracts with large corporations more often than not include some form of old age pensions.

Mounting emphasis on old age security has come through the past 20 years, stimulated largely by the Social Security system of the nation.

When Social Security was first introduced people generally looked on it as a source of enough money to see them through the later years. But as inflationary pressures have built up since 1940, and threaten to be still more effective in the future, many persons have known that the amounts provided by the Government program would not suffice.

True, today a man and wife reaching 65 will get Social Security payments of around $120 a month as the top, yet more and more they are thinking in terms of $200 as their minimum needs if they are to spend their years fishing or duck shooting in North Carolina as the insurance ads so often illustrate.

This calls for a supplementary program. True, the working man can save enough to cover this extra need if he doesn't run into bad luck in his family or investment affairs. But the truth is that relatively few families have any significant savings when the breadwinner reaches 65.

Big companies often provide the supplementary retirement benefits for their people. Little companies rarely do. This often gives the large employer a better standing in seeking the best men for his industry.

Naturally, some men and women much prefer to work for little outfits, principally because they feel less pressure in more intimate surroundings. But while they make this choice, they nonetheless often feel that they do it at a sacrifice of long range security.

Company pension plans, although designed for the benefit of the individual worker, have definite benefits for the company, too. It is very difficult to discharge a faithful employee in his later years even though his value to the company has declined. On the other hand, where a company has a definitely fixed retirement policy with financial benefits, there is no hesitancy about it.

Again, persons with a cash stake in an enterprise will feel more responsibility to help make it a success . . . they're on the team.

All of this leads up to a retirement income plan for employees set up by Charles L. Elliott Co. of Danvers, Mass. Everett Elliott, son of the founder and active manager of the

Left: Driver Roy Pennell *is typical of the enthusiastic group in the Elliott organization and not infrequently he delivers 6,000 gallons of No. 2 oil in an eight-hour day.*

Right: Discussing *the pension plan are Eben Lufkin, Samuel O. Penni, Jr., and Everett Elliott. Everett in 1929 joined the company his father had started as a coal operation back in 1913. Today's coal and oil sales run about 50-50. Fueloil marketing began in 1939; oilburners in 1948. Last year the company sold about 150 Delco burners, 12 Electric Furnaceman stoker boiler units. The company operates three each oil and coal trucks, has four service men, some part time, and has a downtown office and showroom. A director and first vice-president of OHI of New England, Elliott will be president in 1954, following the group's progression. He is also a director of the Retail Fuel Institute.*

business, worked out the program in collaboration with Samuel O. Penni, Jr., partner in the Boston brokerage firm of Truman Hayes & Co.

It was at the Philadelphia OHI convention in April that a friend of Elliott brought the activity to our notice. It seemed amazing. Not that pension plans were anything strange, but that a company with only 12 employees could have one on a sound basis. We had never heard of such a thing.

Accordingly, at the close of the API Marketing meeting in Boston at mid-May, a visit was made to Danvers to get the details. Volunteering to furnish a car to get there, Eben Lufkin, prominent New England bulk-plant builder, sat in on the conference.

Highspots of the Plan

Highspots of the pension plan include these points: 1) any male employee 25 or more years of age and any female employee 30 years of age or over is eligible providing they have been working three years for the company; 2) the company pays the full cost, employees pay nothing; 3) the amount of monthly pension paid after reaching age 65 is one per cent of the person's monthly salary multiplied by the number of years' service; 4) the cost to the company is around 10% of its payroll.

The three-year waiting period is, of course, designed to let both the company and the man look each other over. Floaters would mess up the program. If the man doesn't like the business or the boss he won't be there three years.

In starting the pension plan this spring, only eight of the company's 12 people were eligible; the other four hadn't yet been there three years. Because the plan includes group life insurance as an auxiliary to pensions, each employee had to pass a life insurance examination.

Elliott's folks all passed without difficulty, but if any of them had not passed they would still get the pension without the intermediate life insurance.

To administer the whole program the Charles L. Elliott Trust was created, composed of the father, the

SUMMARY OF YOUR PARTICIPATION

IN

THE CHARLES L. ELLIOTT COMPANY PENSION TRUST

Having completed 3 years of service with the Charles L. Elliott Company prior to May 1, 1952, you are entitled to participate in "The Charles L. Elliott Company Pension Trust."

RETIREMENT BENEFITS:

Your monthly benefits are based on 1% of your earnings times the number of years you will be with the Charles L. Elliott Company prior to normal retirement date, which is your age 65.

You are age 31. Therefore, you will be in the plan 34 years before your retirement date. You will receive in pension at that time 34% of your monthly salary which is $260.00.

34% of $260.00 equals ..... $ 88.40

LIFE INSURANCE:

Your life insurance is $1,000 for each $10 per month of retirement income. Therefore, you will have ..... $ 8,840.00 of life insurance or the cash value, whichever is greater, to be paid to your family in a manner to be designated by you.

TERMINATION:

If you leave the company for reasons other than moral turpitude you will have the following Paid-up at Age 65 Endowment Policy:*

During the first five years	nothing
" " next " "	$ 559.13
" " " " "	2,347.02
" " " " "	5,231.07
" " " " "	9,293.16
At your Age 65	$14,630.20

* This means that if you die after termination of your employment before age 65, your family will receive the money—if you live to 65, this money will be used to buy for you a retirement income.

SOCIAL SECURITY:*

According to present Social Security Law, there are benefits payable under certain conditions to your family when you die and to you at your age 65 if you live.

These payments are in addition to payments from The Charles L. Elliott Company Pension Trust.

For your information, these benefits may be listed as follows:

If you live:

Social Security for you at age 65	$ 74.00
" " for your wife at her age 65	37.00
Maximum Total	$ 111.00
Add Charles L. Elliott Company Pension Trust	$ 88.40
Grand Total	$ 199.40

When you die:

If your widow has children under age 18 dependent on her, she will receive	$ 74.00
and in addition for each child	37.00
Subject to a limit of ..... (per mo.)	150.00
If your widow is over age 65	55.40
In addition, there will be the life insurance from the Charles L. Elliott Company Pension Trust of ..... which can be arranged to be paid as monthly income to your family.	$ 8,840.00

* NOTE:

(1) Social Security benefits are paid for by deduction, of 1½% of your salary plus contributions of a like amount by The Charles L. Elliott Company.

(2) Benefits listed above are estimated on basis of payments after August, 1952.

Questions and Answers Which May Be Asked in Connection with the Pension Plan

PARTICIPATION IN THE PLAN:

1. Q. Who is eligible to participate in the plan?
   A. All full-time male employees who are 25 years of age or over, and female employees 30 years of age and over who have completed 3 years of service on or before May 1, 1952. No employee over age 55 is eligible.
2. Q. Will it be necessary to submit to a medical examination?
   A. Yes, for the life insurance benefit. Employees who cannot pass the medical examination will be provided with the retirement plan without life insurance.

3. Q. What must I do to participate in the plan?
   A. Complete a life insurance-retirement annuity application.
4. Q. What will it cost me?
   A. The entire cost is to be paid by The Charles L. Elliott Company.

RETIREMENT INCOME:

1. Q. How is the amount of my monthly retirement income determined?
   A. The total pension shall be equal to 1% of your salary multiplied by the number of years that you are in the plan. For example, assume that you earn $200 per month and that you are age 25 when you enter the plan. This means that you will be in the plan for 40 years or in other words, that you will receive a pension of 40% of $200 or $80 per month. No pension will be less than $20 per month nor more than $150 per month.
2. Q. What happens if my earning rate increases?
   A. If the increase is sufficient to provide an additional $10 of retirement income per month when the above formula is applied, then your pension will be increased accordingly. If an increase in earnings does not warrant a $10 increase in the pension, then no change will be made. No changes, increases or decreases, shall be made after age 55.
3. Q. Suppose my earnings decrease?
   A. Your pension will be re-computed on the basis of the same formula. However, no changes reflecting a decrease of less than $10 will be made. In any event, no changes in your pension, increases or decreases, will be made after age 55.
4. Q. When do my monthly income payments begin?
   A. On the anniversary date of the plan nearest your 65th birthday.
5. Q. Is this pension in addition to Social Security?
   A. Yes. The pension is in addition to any other source of income you may have.

DEATH BENEFITS:

1. Q. How much life insurance will I have?
   A. If you are insurable at standard rates, you will have $1,000 of life insurance for each $10.00 per month of pension. For example, if you have a pension of $80.00, you will have life insurance of $8,000.
   If you are not insurable, the death benefit will be the premiums deposited for your annuity or the cash value, whichever is greater.
   If you are insurable at an extra premium, you will have the right to pay the extra yourself or to have the annuity without the insurance.
2. Q. How is my life insurance paid in the event of my death?
   A. To the named beneficiary in a manner to be selected by you subject to the rules and regulations of the insurance company.
3. Q. What will my beneficiary receive if I die after my retirement date?
   A. Your monthly retirement income payments are guaranteed for 10 years. If you do not live to receive them all, your beneficiary will receive the difference between what you have received and what you would have received had you lived the 10 years—a minimum of 10 years of payment must be made by the insurance company to you or your heirs.
4. Q. How long will I receive monthly income payments?
   A. As long as you live.
5. Q. Are there other options as to payment to my beneficiary in the event of my death after retirement?
   A. Yes, there are several income plans available but they will not be selected until shortly before you retire. However, some of the plans you may elect will provide an income for either you or your wife as long as either one of you live.
6. Q. May I change my beneficiary from time to time?
   A. Yes.

TERMINATION:

1. Q. What happens if my employment is terminated?
   A. If your employment is terminated other than for reason of moral turpitude, you will be entitled to a percentage of the insurance contract purchased in your behalf. Your share of the contract will be in the form of a paid-up endowment at your age 65. The following percentages will apply if you leave:

Within the first five years	nothing
" " next " "	25%
" " " " "	50%
" " " " "	75%
" " " " "	100%

   However, after your age 55, if your employment is terminated you will be entitled to 100% of the contract regardless of how many years you have been in the plan.
2. Q. Can I take the cash instead?
   A. No. The purpose of the plan is to provide insurance for your family and income for you on retirement.

GENERAL QUESTIONS:

1. Q. Does the Charles L. Elliott Company own the policies?
   A. No. The policies are owned by the Trustees of The Charles L. Elliott Company Pension Trust which is separate and distinct from the Charles L. Eliott Company and the policies or the money in the Trust can never come back to the Charles L. Elliott Company under any circumstances.
2. Q. What happens if the Trust is terminated?
   A. The policies and any other funds are turned over to the participants in the plan.
3. Q. Can the plan be amended?
   A. Yes, but you cannot be deprived of what has been purchased for you up to that time.

company lawyer and one employee. This trust receives the funds from the company and in turn invests them with the insurance company that provides the protection. The trust is responsible to the employees to faithfully protect their interests in the whole procedure. In the remote possibility that the company should ever go broke, all funds in the trust would accrue to the participating employees, ratably, for neither the company nor its creditors would have any claim to them.

The pension after 65 is paid for life or for a minimum of ten years if the pensioner should die in a shorter time. Several alternate plans can be substituted, as in any typical insurance endowment policy, but not until the retirement period arrives.

An employee need not wait until 65 to retire. He can do it any time from 55 on, but his benefits will be considerably smaller.

To launch the plan Elliott sent to the home of each employee an attractive folder outlining all the details and personalizing his own participation. One of these presentations is reproduced on this and the facing page.

The Company's cost for this program has been mentioned as approximately 10% of its payroll to eligible employees. The average age in the group is 35. If the average age was considerably higher the cost would be more, just as endowment insurance costs are scaled upward with starting ages. A more typical company might find its costs running to 12 or 13% of wages.

The Wage Stabilization Board must approve the plan, since in effect it is raising wages. The Department of Internal Revenue must approve it since the costs are legitimate business expenses for tax purposes. Getting such approvals is routine, providing the plan has been worked out by a broker who knows his business, and providing that the company's balance sheet shows that it is sound enough to expect to stay in business.

This whole project may point the way to a solution of at least a part of the industry's manpower problem, particularly among the small fueloil distributors or burner dealers.

More on "Exam for service Men"

Many Readers favor Licensing; a few object to Questions #1, #4, and #12

by
J. W. Schulz

SERVICE MEN are rugged individualists. They like their work because, for one thing, it leaves them free to use their brains and make the moves they conclude are correct. They work without a boss breathing down their necks ready to make comments, offer suggestions and corrections, and give orders. The capable, conscientious service man can do just about what he likes as he goes about his everyday work of starting-up, adjusting, and repairing oilburners. He wants lots of freedom. He has it.

Routine questions-and-answers that inevitably bring with them the slightest hint of regimentation might not, then, seem to jibe with the rugged individualist nature of the oilburner service man, nor for that matter with the freedom-loving nature of the typical oilburner dealer. Despite this, it turns out that both service men and their burner-dealer bosses show tremendous enthusiasm for a written examination designed to show whether or not a service man knows enough about burners to be safe servicing them.

Hundreds and hundreds of verbal and written comments from service men and burner dealers resulted from the appearance, in the April issue of FUELOIL & OIL HEAT, of an article that contained a 25-question examination for service men. The comments revealed that, first, FO&OH readers want more articles on examinations which deal directly with dirty-hand doings in basements. Second, the service men and dealers who speak up about licensing service men are heartily in favor of such licensing.

The comments that poured in seemed to come mostly from men truly expert at burner service work. The first few dozen letters which appeared told of the writers' having passed the 25-question "licensing examination" with flying colors, having gotten wrong only one, two, or three questions. Almost every man who had given wrong answers explained why in full detail. A few, as will be outlined presently, found need for improvement in certain questions or certain of the possible answers. They thought more suitable answers to the problems could have been presented, or that some certain question was unsuitable for an examination intended to show whether or not a man was safe servicing burners.

Then came a properly-proud, glowing letter from the wife of a service man who had proved he could easily get 100% taking such an examination. Written in North Chelmsford, Mass. without the knowledge of the service man, the letter related that "he has never left a customer without heat overnight" and concluded with, "I am writing to you because I am interested in his work. I have a lot of confidence in his ability, and I'm just doggone proud of him and wanted to tell you how well he did in your exam."

That's the kind of a wife a dyed-in-the-wool oilburner enthusiast needs! Her words fit on the bulletin boards of service organizations whose cus-

Joseph Matus *(right) is emphatic that service men should be licensed. C. A. Fry (below) agrees but believes the exam could be a little "tougher" since an oilburner service license is at stake.*

May 16, 1952

Dear Mr. Schulz:

Enclosed you will find seven sets of examination questions turned in by our local distributor's service department.

You will note that several of them got question No. 4 wrong. In talking to them, they stated that they had thought we were speaking of a two-stage pump with the by-pass plug installed - a rather remote assumption.

Question No. 1 caused considerable discussion and in my opinion is not a particularly good question for a service man. I can't see that there would be much discussion on Question No. 24. Of course, there are possibly other answers to it, but of the four listed in the exam B is the only possible answer.

One of our distributors thought the exam was too easy, but he is an old timer in the business and should know all the answers. I believe that it could be made a little tougher, since the man is being examined for a license.

Yours very truly

YORK-SHIPLEY, INC.

(Signed) C. A. Fry

CAF:jm
Enclosure

C. A. Fry, Factory Service
and Parts Department Manager

Matus Automatic Heating Service
100 Court Street, Freehold, N. J.

April 12 1952

Fueloil & Oil Heat
Gentlemen:

Your article by J. W. Schulz "Exam For Service Men" was very very good. Would like to see more of them in future issues, and agree that service men should be licensed. The sooner the better.

I also agree with you that a man with a limited education would have difficulty in comparing with a more educated man in drawing up answers to examination questions. With the method you have used, unless a man knows he doesn't stand a chance. He would have to be lucky — extremly lucky!

I was anxious to try the examination, and I got 24 answers correct. I fell down on question #4 I marked c as an answer. I had something else in mind. If for instance a Webster pump was changed to a two pipe system and no return line connected, with plug still in outlet opening, excessive pressure would occur and pump seal would be damaged. However, I learned much more than I thought I knew. Keep up the good work!

Very truly yours,
(signed) Joseph Matus, Prop.

April 29, '52

Dear Mr. Schulz:

My husband is an oil burner service man and last night he took your "Exam for Service Men," in the April issue, and passed it with a perfect 100% and I think he's pretty smart.

He reads just about everything he comes across pertaining to the heating industry and when he found your exam he was quite anxious to see how well he could do.

He asked me to read the questions to him, and as I came to the correct solutions he always stopped me. When I asked why he didn't let me read all of the solutions first, he said—"There's no need to because there's only one right answer." And he was very sure which answer was right.

He said afterward that as I read each question, he had a clear mental picture of the problem and knew what should be done to correct it.

This just proves what I already knew—that he's a top notch service man.

He has been servicing, selling, and and [illegible] domestic [illegible]

Here's *what we learned about her husband on the sly from Mrs. Carl F. Sundquist, North Chelmsford, Mass. Is she proud? And she should be! Notice how her husband penalized himself in taking the exam; he answered before hearing all four possible answers to each question. Still he got a mark of 100%! The last sentences of Mrs. Sundquist's letter appear in the article. We need more letters like this from readers' wives.*

tomers suffer because nagging wives don't like their service-men husbands to answer breakdown calls nights and weekends.

The April issue article in FUELOIL & OIL HEAT had said that each of the 25 questions counted as 4% and a mark lower than 76% failed. On that basis, a man failed the exam if he answered more than six questions incorrectly.

At first, all the letters and comments told of service men, dealers, factory men, and salesmen who took the exam and answered incorrectly only one, two, or three questions. There was an odd contradiction, however. On the one hand, those who sent in letters about the examination found it too easy; many requested a new examination having tougher questions. On the other hand, some complained about the unfairness of the questions-and-answers they got wrong.

To head off as much as possible complaints about unfairness, the article on the exam had been cushioned two ways.

First, Point #2 in the instructions for taking the examination had read: "If you do not find an answer which is precisely correct to your way of thinking, then mark as correct the listed possible answer that you think is most nearly correct."

Second, this paragraph came at the end of the examination:

"Men who have gotten low marks in examinations often complain that they could not understand the questions. The answers to that complaint are: First, the men who took the same examination and got high marks understood the questions. Second, the man who doesn't understand simple English should not be servicing oil-burners, because he can't understand the instructions that come with complicated equipment and which must be followed for the sake of safe, dependable, and economical operation of the equipment."

Few letters came in from dealer organizations whose men did not show up well taking the examination, and to judge only from the letters that poured in it appeared that almost every service man who took the exam passed it. Field trips were necessary to find companies who had tested their service men and found them "unsafe for servicing burners." Circumspect investigation revealed such companies, too many of them. The service men who failed were not talking much. Their bosses had little to say. The examination was not belittled or declared unfair.

One dealer whose men had done miserably said they did not read FUELOIL & OIL HEAT regularly and usually did not read bulletins and instructions issued by the manufacturers of the equipment they install. He said that he'd like to give his service men a 25-question exam every month, so they'd learn something.

Another dealer first asked "one of his best men" to take the examination, and the result was a mark of 48%. Hearing of this, the dealer's other two

William C. Robbins *points out in his letter he thinks some alternate answers are better for certain questions. In drawing up the exam it was purposely tried to provide for each question three answers that were not too obviously wrong and a single answer that was not all-too-obviously correct. Mr. Robbins, along with others, thinks that 6-minute "on" periods mentioned in question #1, are too short.*

15 Edison St., E. Htfd.,Ct.
April 16, 1952

Dear Mr. Schulz,

I accept your challenge and stand correction. I found your test for servicemen very interesting, clear and instructive. I timed and marked myself honestly and found that I took a little less than 15 minutes with one wrong answer. The fellow I work with came out exactly the same. In question No. 1, we both chose B instead of C. In defending this choice, I have been more or less educated to consider longer firing rates for better combustion and better balance between the firing rate and the load.

I do not think any of the given answers are wrong, but believe there are other alternate, if not correct answers. Having read a great many of your articles, I am sure you are equally aware of this. For example:

Question #1 - a. Overfired; b. High Limit Control set too low; c. If steam, poor venting, building up steam pressure; d. Wrong thermo location, adjustment or heater.

Question #3 - a. Short in trans., other equipment, controls or wiring; b. Fuses not of sufficient Amps.

Question #6 - a. Loose or defective nozzle; b. air in pump or lines; c. Leaky fitting between pump and nozzle.

Question #10 - a. Plugged filter, strainer, or suction line.

Question #12 - a. Reduce stack temp.

Question #16 - a. Weak trans.; b. Partially plugged nozzle; c. Too much primary air; d. Defective pump; e. Relay (with separate ig. timing) defective.

My only other comment is, that in most of the tests I have taken for licenses, more of the questions seem to be on heating than on the mechanics of oil burning. It would seem that a good serviceman today has to be a pretty good heating engineer also.

Yours very truly,

(Signed) William C. Robbins

William C. Robbins

service men refused to take the exam. They argued that despite the article's stating a good man should get 76% or higher, the exam might be too difficult for any service man within 100 miles; they'd been doing service work and holding their jobs all right without taking any written examinations, and they were not going to get into something that might prove them unfit or unsafe for working on burners. This dealer could not pass the exam because he never serviced burners.

Oddly enough, a certain service man who failed the exam by getting 13 questions wrong declared that anyhow he was an expert at setting the spark points of a pressure burner, because he'd concentrated on this for about 15 years. He spoke about spark point settings for more than an hour. His big point was that the questions and possible answers should not have mentioned 1/8" as a possible spark gap for a gun-type burner. The minimum gap for some burners is 3/16", he declared flatly, because setting for a 1/8" gap causes the spark to have so little "reach" towards the oil spray that (using a 1/8" gap) it's necessary to set the tips very close to the oil spray. Then on many jobs you get puffs and "off-on-safety" service calls after the oil spray from the nozzle changes because different fueloil is delivered or something goes wrong with the nozzle. Carbon forms and shorts the points, or else the short spark just doesn't reach out to the oil spray.

This man talked so expertly about ignition problems that we asked him why he'd failed the exam. It developed that he knew little about such things as gph rates, CO_2, draft, and stack temperature. He didn't know the type or shaft speed of the motors used in pressure burners, and didn't know a thing about applying pressure gages and vacuum gages to pressure burners. He just used his tools to adjust burners and make sick burners well again, he said. No instruments were in his car and no numbers about high-class performance were in his head. But nobody could tell him a thing about setting spark points properly, for he specialized in that!

Analyzing the comments from service men, factory men, and burner dealers led to the conclusion that exam questions #1, #4, and #12 were the troublemakers for the men who are service experts or service engineers, and who failed to answer every question correctly. Question #10 bothered a few men; so did question #24.

Of the men who wrote to comment on the quality of the examination and reasonableness of the questions, most talked about question #1 because it mentioned six-minute oilburner "on" periods. The others discussed questions #4 and #12, but with much more mildness than shown by those upset by the six-minute "on" periods assumed to be correct in question #1.

Here is question #1, which brought in almost all the letters discussing the quality of the service man's examination:

Question 1—An oilburner owner complains that in winter his burner starts and stops too often. It runs for six minutes, stays idle for 15 to 25 minutes, then starts again. Which of the following items indicates what you might tell the owner?

A. Order fueloil, because you need it.

B. Burner motor may burn out because of excessive starting and stopping.

C. Such starting and stopping is all right; owner should not complain.

D. Stack control is defective.

In considering which of the four possible answers you will mark correct, you've got to consider of course that the examination instructions stipulate that where you don't find a possible answer that suits you precisely, you mark as correct the listed possible answer that you think is best.

The correct answer to question #1 could not possibly be "A." Everyone agrees to that, excepting one fueloil dealer and his service expert (Rus Campbell and Ed McGovern) who after reading question #1 roared out, "Order fueloil is correct! No customer ever does the wrong thing in ordering oil from us!" However, let's forget about selling all the fueloil we can, and on that basis "A" is the wrong answer for question #1.

"B" is wrong because starting a burner motor every 20 to 30 minutes would not cause it to burn out because of excessive starting and stopping. But you might wear out a motor starting and stopping it needlessly, one burner dealer wrote to tell us. He says he knows one make of motor that's not suitable for the 15,000 starts a year that result from a combination of six-minute "on" periods and 1,500 hours of burner operation a year. But answer "B" obviously is wrong.

(*Please turn to page* 167)

April 29, 1952

Dear Jack:

Today I had the pleasure of "taking" your oilburner service man's examination, and of discussing it with two of our Winkler dealers. The results were interesting, to say the least.

First of all, I'm proud to say I rated 100% in the test, although there was one question which I answered on the basis of "general oil burner practice" as differentiated from Winkler methods and theory proved in the field consistently by thousands of installations of our LP burners. That question was No. 1, something like this: Customer complains that his burner runs 6 minutes and is off 15 to 20 minutes, then runs 6 minutes again. What should service man tell him?

The Winkler answer (and I believe your own, Jack) would be that 6 minutes on and 15 or 20 off would not be conducive to most efficient combustion, as the burner would be turned off just as the firebox would be reaching the proper temperature for efficient oil-burning.

At any rate, I went along with general burner practice since no other reasonable answer was given, and thus I indicated nothing was terribly wrong with this operation. I was pleased to note, however, that two of my dealers agreed with me. In fact, they both got 96% on the test because they both thought something was wrong with such short "on" periods. These dealers are: Harry Morgan and Jack Walker.

I extend you my compliments on the closing paragraph of the examination article, speaking as a Factory Representative. If a man can't understand simple English, then he certainly should not be servicing oil burners.

Very truly yours,

(Signed) Maurice J. Smith

District Sales Manager

Maurice J. Smith, *a well-informed factory representative got 100% in the test, but he too objected to the 6-minute firing periods in question #1. Couldn't the men who found these "on" cycles too short imagine a forced-air job producing tolerably smooth heating only when the burner runs but six minutes at a time? One dealer said it would wear out the starting switch in a year or so operating the motor in this way.*

'Round-the-Clock Unloading

How bulk plant Deliveries by Transport can be worked out on a 24-hour Basis

The following is a report of the Technical Committee of the Distribution Division, Oil-Heat Institute, as presented at the Institute's January Board of Directors meeting in Cincinnati, Ohio. Members of the Technical Committee who prepared the report are: George H. Wolf, Jr., chairman; Thomas A. Carson; Joseph A. Collins and William M. Pritchard, who acted as consultant.

CLOSER COOPERATION between fuel-oil dealers and tank truck transportation companies is paying great dividends, as the longer hours the transportation companies have access to the dealers' plants, the greater the flow of oil to the plant.

Transportation and oil distribution is essentially a 24-hour business, and only by utilizing around-the-clock services of the tank truck carriers can the peak winter demands be met. Each year the problem of peak business, combined with bad weather and small storage, in many cases, creates the illusion that there is a shortage of transportation. The facilities of tank truck carriers around the country, in numerous instances, are not used to their fullest during the peak demands.

Surveys show carriers are capable of hauling 25 to 35% greater gallonage if unloading hours are not limited from seven to five, and in some instances even less. Naturally, bad winter weather slows all transportation, and particularly highway transportation, requiring longer periods of time for deliveries. With a greater number of vehicles on the highway, each year operations during the winter period are being considerably handicapped during the congested daylight hours.

We have had a series of mild winters in certain areas, then sudden snowstorms that have taken the motoring public completely by surprise, and tied up traffic beyond any conceivable stretch of the imagination—simply because a lot of people have never learned to drive in snow, due to the successive mild winters in the sections in which they live.

Friday, December 14, 1951, will long live in the memories of people in the eastern area of the country, particularly in the Philadelphia, Baltimore, and Washington area, as this section was struck by a sudden storm which caused traffic to be locked tight, due to the fact that a quarter of a million cars were abandoned on streets and highways throughout the area of Philadelphia, Baltimore and Washington . . . 75,000 cars were abandoned in Philadelphia alone. Despite the frantic appeals of police departments, some cars were not removed for as long as thirty hours, or even more, after they were abandoned.

We mention this especially because we know of the drastic action taken by authorities in some of these cities. Pittsburgh has passed an ordinance that makes it mandatory to install chains before moving, under certain conditions. We understand Baltimore and Washington are contemplating similar ordinances.

The police, realizing the hazards of such a situation, were shocked and amazed, from the standpoint of public safety, due to the fact that conditions made it impossible, in many cases, for fire trucks and ambulances to move, because of the abandoned cars and the congestion.

The police authorities are in an ugly mood, particularly since the release of the 1951 figures covering highway fatalities—in fact, they are getting panicky. We and the carriers, for the first time in our experience, are finding that the authorities have closed highways to all traffic, quite frequently this winter. In numerous cases they are over-cautious, and this interferes drastically with the movement of commercial traffic.

The tank truck carrier's operations, because of short storage at far too many plants, become a virtual nightmare under these conditions. They realize they are partners with the fuel-oil dealer, and that he has his troubles, too, keeping the flow of oil moving.

The fueloil dealers have made great strides since they developed the idea of degree-day deliveries. They gained the confidence of their customers and eliminated confusion. They lessened the peak demands, to a great extent, and utilized their equipment more fully.

Likewise, there should be greater confidence in the trucking companies, and closer cooperation between oil dealers, distributors, and trucking companies with an intelligent approach to the problem, to relieve the fueloil dealer's anxiety about his supply and transportation problems.

It is fair to say that thousands of dealers have found, with safeguards against contamination and other factors in a routine procedure, tank truck carriers are giving them satisfactory 'round-the-clock deliveries. This eliminates the necessity of dealer personnel being tied up waiting for trucks to

come in, and, consequently, saves both the employes' time and dollars.

The close cooperation between truckers and their customers is well-illustrated in keeping the super-markets supplied. The Atlantic & Pacific Tea Company and other big chains use "For Hire" carriers, who are given keys to super-markets, and all produce and bakery goods are delivered during the hours the super-market is closed. It can be readily appreciated what a saving this means to the super-market operation, as well as giving the super-market customer the benefit of fresh produce and bakery goods the minute the market is opened.

Another illustration of close cooperation is the film carrier, who has keys to the theaters and exchanges films and posters after the closing of the theater — a truly unique service. The newspaper and magazine distributors are also doing a great after-hour job, through cooperation with their customers.

We mention these operations to show what confidence and cooperation between business men can do. The tank truck carrier and the oil dealer are certainly equally as good business men, and should be able to enjoy similar efficient service and savings to that achieved by the great super-market companies, the theater manager, the newspaper and magazine publishers.

Many Plans have been worked out

Some carriers and oil dealers have worked out simple plans, while others have made more elaborate ones. This much is certain—a job of 'round-the-clock deliveries is being handled by thousands of dealers, and the tendency is to do more and more of it. Everyone is trying to solve the problem of their higher output, which has shown a steadily mounting increase, without a corresponding increase in the size of their storage facilities.

Make no mistake about short storage, short hours—they create the illusion of short transportation facilities, and, unfortunately, short tempers.

The answer is not as difficult as far too many distributors think. The O. H. I. Distribution Division can well present some constructive ideas on 'round-the-clock operating practices that will mean great savings and smoother operation for the oil dealer.

Tank truck carriers have welcomed opportunities to demonstrate their ability to make 'round-the-clock deliveries, with safeguards against contamination, fears of shortage or spillage. These programs, naturally, will vary with the type of oil dealer. If the dealer's activities are confined simply to fueloil, and he does not sell gasoline or other products, his problem is simple. Such dealers' fears of contamination are greatly reduced, and they should have no anxiety. A sample bottle of the product unloaded after hours will be left for inspection. The bill of lading for the load can be left in a self-addressed, stamped envelope, and mailed to the carrier; or if there is a continuous movement, the driver can pick up the signed receipt when delivering the next load.

Quite a large percentage of carriers around the country are making deliveries on this basis, and even to fueloil dealers who carry a full line of petroleum products. They assign to a given plant permanently one or two men who understand the valves and layout of the plant as well as the dealer's employes themselves. This is probably the most prevalent method, and well illustrates the cooperation between transporter and oil dealer.

Some tank truck operators in the Middle West, who travel a much greater distance between loading point and destination, which, by the very nature of the trip, means arrival after daylight hours, have worked out more detailed methods for 'round-the-clock deliveries, that are now also used on shorter-distance deliveries as well. They have designated this procedure as a "Key-Stop" plan.

The plan is, briefly, without going into great detail, that the carrier and the oil dealer together check the plant to determine the safety factors of the plant itself. They mark and identify the lines, and provide a means of locking valves and the pumphouse. The dealer and the tank truck carrier both have keys to the locks, so that after-hour services can be performed satisfactorily. They have also constructed numerous safeguards around the operation.

We cite this to show that practical plans can be established to embrace every conceivable type of oil company or fueloil dealer's plant. The main concern of carriers, too, is that the oil dealer must have a safe pumphouse, as carriers will not make unattended deliveries to a hazardous pumphouse, or where there are unsafe plant conditions. Frankly, some pumphouses should be given more thought, with respect to their cleanliness and safety factors.

Every dealer's operation will vary, and while "Key-Stop" plans of carriers around the country, are broad enough to cover practically every operation in great detail, there will be variations with each physical condition and layout of the various bulk plants. A detailed study of each individual plant by the oil dealer and the transporter will provide the best plan for their mutual satisfaction.

Future oil dealers' bulk plants can be designed for 24-hour operation,

and present plants can be easily modified to eliminate many of the fears connected with unattended bulk plant unloading. Some plants have been modified to the extent that it is not necessary for the transport driver to enter the premises, as the unloading line is brought to the edge of the premises and protrudes through a fence, so that all unloading operations can be completed at this point. Of course, proper safeguards have been set up to avoid overflowing the tank; contamination (by leaving samples in a box provided at that location); and to take care of other safety factors.

Less Congestion; less Delay

There is another factor involved in 24-hour unloading, and that is, in most cases the dealer's loading rack is adjacent to or close to the unloading point for transports. Considerable delay is thus caused to both the dealer's tankwagons and the transporter's tank trucks by congestion, and the equipment getting in each other's way—plus the fact that in most cases the area of the yard is limited as well.

No one can estimate the amount of money that can be saved by the oil dealer through working out a plan with the tank truck carrier to make after-hour deliveries, to replenish the stock that is drawn in the course of a day, at the same time keeping out of day, and keep out of the way of the oil dealer's tankwagons.

Coastal Tank Lines, of York, Pa., is working with one of their large fuel oil dealers — and, incidentally, it is this dealer's idea primarily—on completely automatic deliveries 24 hours a day, with a minimum of his expenditure for labor for unloading, as at no time is it necessary for the dealer's employe to leave his office to handle the unloading. The plan was recently put into effect, and while some of the ideas may seem over-cautious safeguards, they can nevertheless be justified with respect to expenditure, considering the large volume handled by this fuel oil dealer.

Briefly, the plan is this: the transport arrives at the warehouse office, the driver presents his bill of lading, and he is given a sample bottle to take a sample of the load on his unit. He returns with the sample, which is examined by the dealer's employe, who then time-stamps a meter ticket, showing instructions as to which of the two plants the delivery is to be made, as well as detailed instructions covering the handling of the unloading. The dealer's employe also returns to the driver the bill of lading, which has been time-stamped, too. At the same time the dealer's employe turns on a time switch near his desk, to start the flow of current to the pumphouse for the time required to unload.

The transport driver proceeds to the bulk plant pumphouse and hooks up his hose. There is a small door on the side of the pumphouse which exposes the meter and operating switch. Detailed instructions for operating the meter are on the inside of the door. The transport driver sets the meter to zero, inserts the meter ticket, and then pulls the switch to start the pump.

At the conclusion of the unloading, the pump is shut off, the meter ticket is removed from the meter, and the transport driver returns to the dealer's employe at the warehouse office. The meter ticket is signed by both the transport driver and the dealer's employe, and the transporter receives a copy of the meter ticket. The bill of lading is also signed by the dealer's employe.

At the present time deliveries are permitted between the hours of seven A.M. and two A.M., as there is always a dealer's employe available in the warehouse or garage during those hours, who, however, does not have to leave his station. A plan is being worked out on a 24-hour basis.

Plan most practical for Fueloil

This plan is unique, in that it is completely automatic unloading, and its features were developed upon the initiative of the oil dealer, who, we are told, stands to save considerable money through this program.

The plan is most practical for any oil dealer who sells only fueloil. Elaboration upon the plan would have to be made for dealers handling a varied line of products.

If separate unloading points were maintained for a dealer to handle mixed products, naturally the same plan could be effected for the unloading of any products, as it is impossible to operate any other pump but the one for which the dealer's employe, from his office, furnishes power through the time switch. While this installation is quite recent, and there is some thought there may be variations between the loading meter at the refinery and the unloading meter checking out, due to temperature variations, so far observations have shown no cause for alarm, if the meters are watched and checked closely for accuracy.

Around-the-clock unloading is entirely a matter of intelligent people working out a problem to their mutual benefit.

No tank truck operator wants to cause contamination, and he is very happy to see safeguards built around all his deliveries. Every effort to make such deliveries successful and foolproof will be most happily accepted by the motor carrier.

OPS considering Increase for East Coast Fueloil

THE FUELS AND TRANSPORT DIV., Office of Price Stabilization on May 22 recommended a 1.2¢ per gallon hike in tank car prices for No. 2 fueloil along the East Coast, north of Norfolk, Va. The division's recommendation proposed that light heating oil, kerosene and diesel oil ceilings at the Gulf for f.o.b. cargo lots be spelled out; the establishment of specific ceilings for these products at tank car levels all along the Eastern Seaboard; establishment of a ceiling for kerosene at 1¢ above proposed new No. 2 and diesel oil ceilings in the same areas; maintenance of customary differentials between No. 2 oil and all petroleum products at terminal points.

The recommendation, which would be an amendment to CPR 17 was turned over to OPS and one official was quoted as being in favor of making any increases, if any, effective on October 1. That, however, is to be decided by top level OPS officials, inasmuch as the Fuels and Transport Division's recommendation set an effective date of June 1 for the increases.

Tank car ceilings in New York harbor under the proposal would be upped from 9.1¢ to 10.3¢ per gallon.

Selling in your own back Yard

Hancock Oil uses Newspapers to sell to its South Braintree, Mass. "Neighbors"

A CAMPAIGN of consistent, small space newspaper advertising undertaken in April 1951 by Hancock Oil Co., South Braintree, Mass., proved so successful that continuing efforts along these lines have become a regular company policy. Hancock, fueloil and burner service firm, had a rather complicated sales problem to overcome and did it effectively with its local newspaper promotion. As reported in a "Business Building Bulletin," prepared by the Bureau of Advertising of the American Newspaper Publishers Association, Inc., Retail Division, New York 22, N. Y., this was the situation and the solution.

The sales problem was: how to convince prospective customers in So. Braintree, a small community adjoining the city of Quincy, that Hancock Oil was prepared and equipped to offer the same prompt, reliable, efficient, and economical service that larger metropolitan dealers offered—and in a more neighborly way.

It was the kind of a problem which could not long continue unsolved because Hancock faced keen competition from literally hundreds of fueloil dealers scattered throughout the huge adjacent metropolitan area. Also frequent calls were received to haul fueloil to customers living as far as 20 miles from his place of business. The amounts of time consumed in making such deliveries added further lustre to the idea of a more localized clientele. Early in 1951, it was decided to solve the problem through consistent advertising in newspapers. In April Hancock began running one-column-by-six-inch ads three times weekly. Each ad featured simple, informal, friendly copy stressing the advantages of doing business with the home town dealer. Each ad also contained a dominant and eye-catching illustration tying-in with an attention-compelling headline.

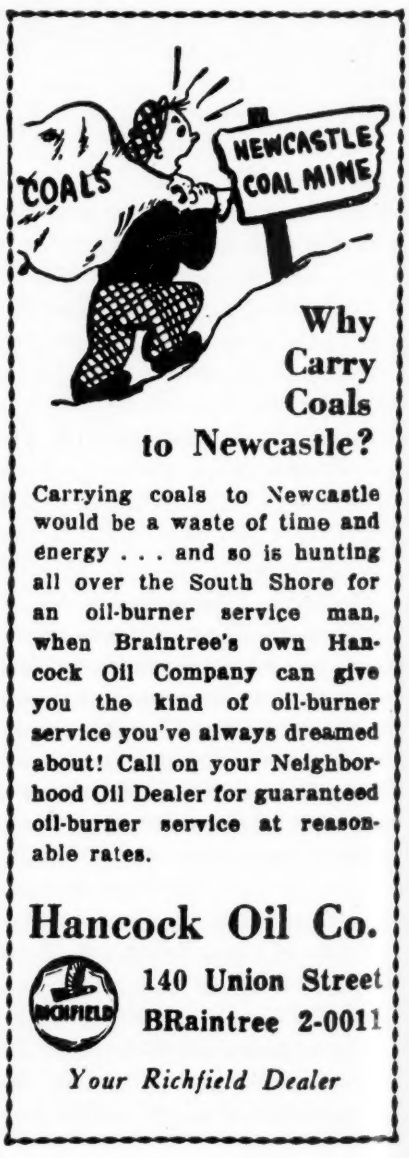
"I consider the campaign to be one of the most successful things we have ever done to increase our business," says J. Douglas Kerr, president of Hancock. "Our current plans are to repeat it every spring, fall, and winter."

Ten representative ads that Hancock has used are reproduced with this article. All reproduce the Richfield trade mark and each emphasizes that the company is nearby and ready for prompt service. For example, the one with the "Far-Away Places" headline says simply, "Far-away places are romantic and exciting. When your oilburner won't work, you don't want romance, you want service!"

Regardless of its theme, however, each of the ads in the campaign identifies Hancock Oil Co. as "your Neighborhood Oil Dealer," ready and available for "quick, dependable service."

By adopting this friendly approach and repeating it time after time on a regular schedule, Hancock has taken a sound advertising principle and applied it effectively to his local market. Selling services on a personal basis to "neighbors" and advertising to convince them they will receive fair, dependable and prompt treatment cannot help but bring results. Whether the competition or the market is the same as confronts Hancock in and around South Braintree, this program recommends itself to be tried by almost any burner or fueloil dealer who wants to do business with his "neighbors."

Stay in Your Own Back Yard!
Why go wandering all over the South Shore for an oil-burner service man? Here's the Hancock Oil Company right in your own back yard, waiting to serve you! For prompt, efficient oil-burner service, and for high-grade fuel oil at moderate prices, you just can't beat Braintree's Neighborhood Oil Dealer ... so won't you give us a try?
Hancock Oil Co.
RICHFIELD
140 Union Street
BRaintree 2-0011
Your Richfield Dealer


COALS
NEWCASTLE COAL MINE
Why Carry Coals to Newcastle?
Carrying coals to Newcastle would be a waste of time and energy . . . and so is hunting all over the South Shore for an oil-burner service man, when Braintree's own Hancock Oil Company can give you the kind of oil-burner service you've always dreamed about! Call on your Neighborhood Oil Dealer for guaranteed oil-burner service at reasonable rates.
Hancock Oil Co.
RICHFIELD
140 Union Street
BRaintree 2-0011
Your Richfield Dealer

Home Talent

Yes, Sir, there's nothing quite so satisfactory as home talent . . . whether it's playing the guitar or fixing an oil-burner! And that's why many Braintree folks rely on the Hancock Oil Company for oil-burner servicing. They've found it pays to let their Neighborhood Oil Dealer handle their oil-burner problems . . . and once you've tried us, you'll agree with them!

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

It's Spring-Cleaning Time!

Spring is the time to have your oil-burner cleaned and adjusted so it will be all ready to use next Fall when you need it! A telephone call to your Neighborhood Oil Dealer now can save you money and discomfort later. And you'll be pleased with our quick, dependable service at reasonable rates!

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

Good Neighbor Policy

Good neighbors are a mighty nice thing to have . . . so why not get acquainted with your Neighborhood Oil Dealer, the Hancock Oil Company. You'll find we're real good neighbors when your oil-burner needs fuel or servicing. Prompt, efficient service is our specialty . . . and our rates are neighborly, too!

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

Far-Away Places

with strange sounding names!

Far-away places are romantic and exciting. But when your oil-burner won't work, you don't want romance . . . you want service!

That's why it's smart to patronize a local service man. He's always right there when you need him. And that's why Braintree folks take their oil-burner troubles to their Neighborhood Oil Dealer, the Hancock Oil Company. They know they can depend on us for quick, reliable oil-burner service when they need it . . . and you can, too!

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

Put All Your Eggs in One Basket!

When it comes to oil-burner service, it's a good idea to put all your eggs in one basket.

High-grade fuel oil, expert maintenance and quick repair service . . . you'll find them all at your Neighborhood Oil Dealer. Let the Hancock Oil Company handle all your oil-burner problems. And, by the way, now's the time to let us clean your burner for next Fall.

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

Home-Town Folks

The nicest thing about home-town folks is that they're always glad to help out when you need them. That's why Braintree folks like to take their oil-burner troubles to a Braintree firm—the Hancock Oil Company.

Try it yourself . . . you'll find you can depend on your Neighborhood Oil Dealer for quick, expert, friendly oil-burner servicing.

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

Bear This in Mind!

Spring's the time to get your oil-burner cleaned for next Fall . . . and your Neighborhood Oil Dealer's the man for the job! A 'phone call now to the Hancock Oil Company will save you heating problems next September.

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

There's No Place Like Home

There's no place like home for getting the kind of service you want! Take oil-burner service for example . . . more and more Braintree people are finding out that the way to get the best in oil-burner servicing is to call their own Neighborhood Oil Dealer, the Hancock Oil Company. Try us yourself. You'll be glad you did!

Hancock Oil Co.

140 Union Street
BRaintree 2-0011

Your Richfield Dealer

Riker's *six delivery trucks, grouped in front of the storage tanks he leases at Port Washington, N. Y. Last year these trucks delivered four million gallons of fueloil throughout most of Nassau County.*

Self-service Trouble-shooting

Riker's Sav-A-Call Plan shows Homeowners how to find and correct minor burner Faults

by
Bert Dunphy

OILBURNER SERVICE CONTRACTS, all-inclusive and otherwise, are as popular as they are for a number of reasons, not the least of which is the appeal to the homeowner that permits him to budget in advance his annual service costs. Unhappily, though when a customer has signed a service contract, it is not unusual for him to call for service many more times than he would if he were on a per-call basis and knew that every time the service man worked on his burner he would be charged for it.

Unnecessary service calls, too, are a pain in the service department and, contract or not, these still show a national average of about 10% of all calls, with many dealers quick to declare that their ratios are much higher. When an oilburner user has a service contract, these unnecessary calls naturally increase the dealer's cost and the homeowner who has no contract, of course, pays for each one and adds to his heating bill. All in all, every one of these calls costs somebody money without good reason.

The Riker Oil Co., Inc., Garden City, N. Y., a few months ago instituted its Sav-A-Call self-service, designed as Norman D. Riker explains it "to appeal to the fellow who likes to do it himself—or the young benedict who can't afford not to do it himself, of which there currently are thousands here in Nassau County." Perhaps best known for its Levittown development, Nassau County since the war has seen thousands of the small, lower cost homes built and, just as in other sections of the country, a great many of them have been bought by families who often find it a struggle to make ends meet.

Faced with this situation and mulling over ways to educate oilburner users so that they would be less likely to make unnecessary requests for burner service, Riker devised Sav-A-Call and with Jim Keith, his associate in the company, worked out the details. This was a painstaking process and involved careful and accurate development of a step-by-step method that would simply and safely tell a homeowner what to do when his oilburner was not operating. Outlining these procedures was not difficult, but it was a real chore to write them so that the technical explanations were explicit, yet not so technical as to confuse the user, and emphatic in limiting him in the scope of burner service work he could do safely.

As Riker explains the system in an "Oilburner Service Selector," which describes the seven service plans or combinations the company offers, Sav-A-Call is a copyrighted self-service system, comprising clear step-by-step numbered instruction cards and a series of correspondingly numbered heat resisting labels. The company installs the system automatically with each new burner it puts in and sells it to all its other oil customers who want it for $6.00.

The system is copyrighted, but is being offered to other service organizations throughout the country at a nominal cost.

When a customer buys the plan a company representative delivers the numbered labels and the instruction cards, made up as a booklet measuring 3″ wide and about 6″ deep and secured with plastic binding with a hanger so that the book can be placed near the oilburner or in any other desired location.

The representative spends an hour or more then going through the book of instruction cards, carefully explaining each step and why it should be taken, labelling the corresponding part of the burner system with one of the numbered stickers. Separate books are made up for each type of heating system, so that each time the plan is explained it covers the specific parts of the system that the customer is using.

This instruction is important to indoctrinate the user properly in the purpose and scope of the Sav-A-Call system. An equally important cog in the working of the plan is Riker's service dispatcher, who is a trained service man. If the homeowner finds that the burner still does not function after he has gone through the prescribed steps and then double-checked them, he calls the service dispatcher and, in many cases, can be given over-the-phone instructions without charge that can correct the trouble. Only

after the steps have been tried, checked a second time and the dispatcher consulted is a service man sent to the job, at the regular rates.

Considerably condensed, here is a summary of the cards that are included in the instruction book for a pressure hot water heating system. Step 1 calls for a check of the room thermostat to make sure that it is set at a high enough temperature and explains how the clock of a clock thermostat should be moved ahead 23 hours in September when Daylight Saving Time changes to Standard time so that the burner will not shut off during the day and give heat at night.

Step 1A is another control check, in this system making sure that the hot water control is at the proper setting, which has been explained by the company representative.

Step 2 concerns the oilburner switch, which has been labelled No. 2, and tells the user to make sure it is in the "on" position, to be followed by Step 3, which involves a check of the fuses at the main burner switch box and the meter-fuse box. The final step in determining that there is electricity at the burner makes sure that the electric power to the premises is "on."

Going along next to the heating system itself, Step 5 explains how each radiator can be tested to be certain it is filled with water and Step 6 determines that the boiler thermometer is at the proper level. If it is higher than the high limit switch setting—which has been explained to the user during the instruction period — the card explains that the burner will not start, but should go on automatically when the boiler temperature drops to the proper degree.

Steps 7 and 8 check the fueloil supply, the first seeing that there is oil in the tank, using an oil-measuring stick if there is a gauge on the tank whose accuracy is doubtful and then to make certain the oil line valve is open.

Steps 9 and 10 are the most detailed, No. 9 starting with a single press of the recycling button on the burner control box. If then the burner motor is running, Step 9 indicates air adjustment is called for if the flame is ragged. This is covered in the next step. If there is a good flame after the burner motor comes on and remains running, the burner is all right, but if the burner stops in seconds, there are instructions for cleaning the helix of the limit control, labelled No. 9.

Next, in this step, if there is no flame with the burner motor running and the oil is spraying in the firebox, the user is told to shut off the burner switch and call service. If there is no oil spray, the recycling button is repressed and if the condition does not change, the switch is shut off and the company is telephoned.

The second portion of Step 9 covers conditions when the burner motor does not run even after the recycling button has been pressed. If the motor hums, there is nothing for the customer to do but shut off the burner switch and call Riker. If the motor has no re-set button, or does not start after a re-set button has been pushed, again a service call must be made, after the nine steps have been re-checked. Or, if the motor starts when its re-set button is pushed and the burner functions properly, the company is notified only if the condition recurs.

Step 10 on air adjustment details how the air shutter on the burner may be opened or closed, after the original setting has been marked on the fan housing, to correct smoky or ragged flames. This is designed to correct a condition where inadequate air is being provided for combustion merely because the air adjustment has slipped or if dust or lint should be partially clogging the opening.

The procedure chart for this step cautions that the burner switch is to be shut off and a service call made if there is no improvement after the air opening has been changed. Also, it says, "Do not exceed recommended limits of Sav-A-Call service. To do so may endanger you and your home. Do not tamper with controls at any time. Your tampering might destroy their inbuilt safety features."

The final step, No. 11, for the hot

The front covers *of the complete set of instruction card booklets that have been prepared to be used with the Sav-A-Call self-service system. Each of the books is designed to familiarize a user with specific parts and functions of his own heating system. The inset shows the hanger with which the book may be hung at any convenient location. Numbered service steps refer to the parts of the oilheating plant that are labelled correspondingly.*

water system checks the water circulator and explains that if the boiler has a reverse-acting hot water control, the "circulator may not run until the boiler water temperature is above the control's setting."

For a warm air system, the Sav-A-Call instruction cards duplicate the first four steps, except that the summer switch is checked to be sure that it is not "on" during the winter. The fuel supply and tank valve are verified similarly in Steps 7 and 8, with 5 and 6 for the warm air system concerned with the humidifier and air filters. Replacement of filters or cleaning the permanent type, if they are dirty, is explained, with two reminders included that the burner switch must be shut off before the work is started.

The warm air system covered in this series of instructions is presumed to be equipped with a Timken wall flame burner so that Step 9 on the limit control and ignition is prepared to apply to this type of burner. Also, Step 10 includes detailed instructions on how to prime Teesdale, Pentwater, Autopulse and Oilifter wall pumps.

Since Sav-A-Call was made available about 100 of Riker's customers are using the plan and he estimates that perhaps 1,000 of his 3,000 customers are prospects for it.

The summary of Sav-A-Call instruction cards for these two heating systems describes only essential parts and cannot do justice to their completeness. Actually, the procedures are much more detailed and are augmented by explanations made by the company representative. He numbers each part with an adhesive label, beginning with the thermostat, goes into details of the instruction card that is correspondingly numbered and adds verbal explanations to illustrate the purpose for all the steps recommended. In addition, he spends as much time as is needed to answer any questions the customer has and repeats the process until he is convinced the system is fully understood.

Other service Plans

With Sav-A-Call the six other service plans offered by Riker constitute what he calls the "7 keys to a warm hearth" and include a "Hearth-side" heating counsel, during which fueloil customers can discuss heating or burner problems with a company representative without obligation.

Other plans include boiler or furnace vacuum cleaning for $7.50; oil-burning system overhaul and inspection for $7.50; emergency call burner service, sold in conjunction with the vacuum cleaning and overhaul for $19.75, or budgeted in five monthly payments for $22.50; a replacement parts service, on burner parts and controls, also a combination sold with the previous three plans, for $27.65, $30.00 in five installments.

The seventh is Riker's all-inclusive "Burnercare" policy, a combination of the others, but including repair or replacement, in addition to burner parts and controls, of the following: fill box, oil lines, hearth or combustion chamber, all limit controls, low water cut-offs, draft regulator and 275 gallon storage tanks, with an allowance of $75 deducted from the installed price of larger tanks. This policy is available for $29.75 cash or in five monthly installments for $35.00.

Emergency service, replacement parts and "Burnercare" contracts are subject to company acceptance after an initial inspection of the system and annual re-inspection. Also, the contracts may be terminated if the customer purchases fueloil or service from other sources, but provide for automatic renewal at the end of the first year unless notice of cancellation in writing is made.

(*Please turn to page* 168)

RIKER "7 KEYS TO SERVICE" ORDER

To: Riker Oil Company, Inc., Commercial Avenue, Garden City, N. Y.

Please render Oil Burner Service(s) as checked below; performance and terms for same to comply exactly with Riker Service Selector folder and Order Card form, copies of which I am retaining for my records.

CHECK ✓	No.	RIKER SERVICE UNIT	Check (✓) Payment Basis Desired: Payable with your return of this card	Payable in 5 equal monthly instlmts. (1st Paym't. with return of card)
	1	"Hearth-Side" Heating Counsel	NO CHARGE	
	2	"SAV-A-CALL" Service	$ 6.00	NO
	3	"Fuel-Saver" Vacuum Service	7.50	NO
	4	"Sure-Fire" Overhaul Service	7.50	NO
	2 3	Both Units Combined	13.50	NO
★	3 4 5	"Emergency Calls" All Three Units Combined	19.75	$22.50
★	3 4 5 6	"Replacement Parts" All Four Units Combined	26.75	30.00
★	3 4 5 6 7	"Burnercare" All Five Units Combined	29.75	35.00

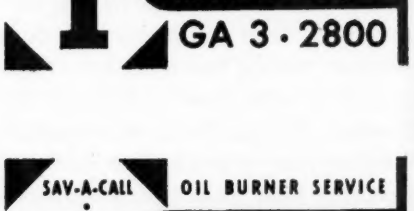
Service Units 3 to 7 (preceded with ★) combined as indicated, are subject to Riker acceptance (1) after initial inspection of burner system, (2) to annual re-inspection at our option, and (3) to the terms on the reverse side of this card. Vacuum service price includes average domestic requirements. An additional charge of $1.00 per hundred sq. ft. will be made for boilers having manufacturer's rating of over 750 sq. ft.

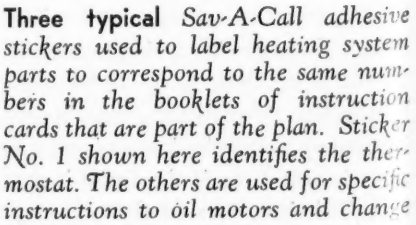
*Date*_____ *Customer's Signature*_____

Phone Riker for special discount where two or more oil burners are at one address

Check (V) Selected Service or Services above. Sign and Remit (where required) in Postage-paid Envelope, Enclosed

Order card *for the "7 keys to service" offered by Riker Oil Co. The individual plans and combinations are listed, along with cash prices and budgeted payments for certain contracts. The card requires only a check alongside the services the customer wants to buy and a signature. The reverse side sets forth the conditions of the contract, explains that it is subject to termination if fueloil or service is bought from other sources and includes an automatic renewal clause after the first year.*





Three typical *Sav-A-Call adhesive stickers used to label heating system parts to correspond to the same numbers in the booklets of instruction cards that are part of the plan. Sticker No. 1 shown here identifies the thermostat. The others are used for specific instructions to oil motors and change boiler water temperature settings.*

Here's a new kind of CONTEST!

$1000.00

IN CASH AWARDS TO WINNERS

Give us the answers to one or more of these 10 questions —

1. What is the best use for fueloil trucks in the summer?
2. How have you been able to increase consumer storage capacity?
3. What is a good wage incentive plan for fueloil truck drivers?
4. What type of burner service plan is best for the consumer?
5. What steps should be followed in an annual clean-up job this year?
6. What is a good wage incentive plan for service men?
7. How have you successfully sold oilburners against natural gas?
8. What is the most practical compensation plan for salesmen?
9. What fueloil credit program is best for low income neighborhoods?
10. Where is the oilheating industry weakest in public relations, and what have you done to correct it?

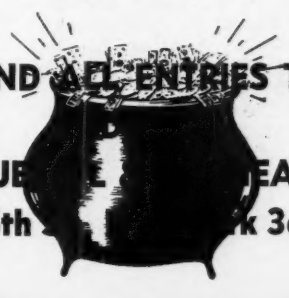
PRIZES There will be ten prizes of $100 each for the best answers to the 10 questions. In addition, just about every original, useful idea will win some recognition and cash award if it's good enough to publish, in the editor's opinion. All entries published will be paid at regular author's rates for as much of the entry as the editor finds useful to publish. (Minimum $5.)

The contest is open to any individual working at the retail level of the oilheating industry. The company you work for must sell at retail either oilburners or fueloil or both. Write your answer to the question in enough detail to make it clear. Use any number of words you like to answer the question, up to 1,500. If a picture or a rough sketch or drawing would help to make your points clear, send them along. Don't worry about your ability to write well. It will be the idea itself that will get attention if it has merit.

Your entry should be typewritten on one side of the sheets only, using as many pages as necessary. Do not put your name on any of the sheets, as the judges must not know who sent the entry. All entries will be numbered when received at the office. So write your name, address, and company connection on a separate slip of paper and clip it to your entry. In that way the winners can later be identified by the editor after the judges announce their choice from the numbers. Each entrant may send answers to as many of the qestions as he wishes, but they must be written separately.

The contest closes August 31, 1952 and entries to be eligible must be postmarked not later than September 2, 1952. Winners will be announced in the October issue. All opinions of the judges will be final, and no entries will be returned to the senders.

THE JUDGES The three judges are men of responsibility in the oilheating industry today . . . men who started at the bottom and came up in their organizations. They have all had experience in about every phase of oilheating dealers organizations and know a good suggestion when they see it. The judges again this year will be: Tom Carson, manager oilheating division, Sherwood Bros. Inc., Baltimore, Md., George Clement, general manager, Modern Heat & Fuel Co., Philadelphia, Penna., Herbert Spade, manager oilheating division, E. Robison, Inc., Hartsdale, N. Y.



SEND ALL ENTRIES TO

FUEL HEAT

2 W. 45th [illegible] 36, N. Y.

Catalog of Oilburner Manufacturers

Part I. Companies listed Alphabetically including Addresses and Executives

THE SECTION that follows gives the complete company name, street address, city and state for the oilburner manufacturers or companies selling oilburners or oilfired heating equipment.

Where it was possible to obtain the information from questionnaire returns, there are included also the names of corporate officers and the date when the company was established. Abbreviations used to designate positions held by executives are:

p— President
vp— Vice-president
s— Secretary
gm— General manager
gsm— General sales manager
t— Treasurer
sm— Sales manager
ce— Chief engineer
am— Advertising manager

Whenever titles are different from these, they are spelled out.

The information compiled herein represents answers to questionnaires sent at least once, and in some cases three times, to all known manufacturers of oilburners and units. Every effort was made to insure completeness and accuracy, and since the information was taken wherever possible from data supplied by the manufacturers, FUELOIL & OIL HEAT cannot be responsible for errors or omissions caused by failure to fill out a questionnaire properly or failure to return a questionnaire.

Ace Engineering Co.
1435 W. Fifteenth St., Chicago 8, Ill. p, G. L. Schurman; vp, gm, J. W. Cowan; s, t, I. L. Schurman; sm, am, R. W. Bardach; ce, A. Eckstein. Estab. 1931.

Acme Heat & Power, Inc.
318 Ten Eyck St., Brooklyn, N. Y. p, Joseph Gigli; s, t, Lola Gigli; gm, sm, Salvatore M. Lombard; ce, Salvatore Oliva. Estab. 1940.

Acme Heating Div.
United Tool & Die Co., 1033 New Britain Ave., West Hartford, Conn.

Acme Oil Burner Co.
210 Third Ave. S. W., Cedar Rapids, Ia. p. William Stark; vp, Nick Stark; s, Herman J. Becker; t, Albert Kalell. gm, G. R. Riley. Estab. 1932.

Acme Tank & Welding Div.
United Tool & Die Co., 1031 New Britain Ave., West Hartford 10, Conn. gm, sm, G. A. Firestone. Estab. 1922.

Acme Tool & Gauge Co.
235-7 Charles St., Providence 4, R. I.

Air Conditioning Eng. Co.
44 First St., Cambridge, Mass.

Aire-Director Mfg. Co.
Aurora at Mercer Sts., Seattle 9, Wash. p, gm, ce, Robert Denny Watt; vp, Mrs. Roberta F. Watt; s, t, S. J. Howell; manager, E. L. Comings; sm, Al Hedlund. Estab. 1932.

Airflame Co.
646 McAlister Ave., Waukegan, Ill. Owner, L. C. Perdue; gm, sm, ce, W. B. Perdue. Estab. 1947.

Airtemp Div.
Chrysler Corp., 1119 Leo St., Dayton 1, Ohio.

Airtherm Mfg. Co.
700 S. Spring Ave., St. Louis 10, Mo.

Alan Distributors, Inc.
164 Main St., Worcester, Mass. p, t, sm, E. Robbins; vp, Henry Wilson.

Alasco Burner Co., Inc.
Winchendon, Mass. p, Sidney N. Fletcher; vp, William D. Brown; s, t, gm, sm, am, Joseph W. Meyer, Jr.; ce, James Townsend.

Aldrich Co.
Wyoming, Ill. p, P. M. Stephenson; vp, J. J. Mascuch and J. F. Lucas; s, H. J. Dwyer; t, F. G. Shupp; ass't s, t, J. C. Read. Estab. 1934.

Allen Mfg. Co., Inc.
300 10th Ave. N., Nashville 1, Tenn. p, sm, Neil H. Cargile; vp, Mrs. Neil H. Cargile; s, t, W. P. Hoffman, Jr.; ce, J. A. Jones; am, M. M. Dowlen. Estab. 1867.

Allied Engineering Co.
20 Glenville Ave., Allston, Mass. ce, John H. Landerman. Estab. 1926.

American Crop Drying Eqpt. Co.
Crystal Lake, Ill. p, Arthur A. Andersen; vp, Bernard C. Mathews. Estab. 1946.

American Fdry & Furnace Co.
E. Washington at McClun, Bloomington, Ill.

American Gas Machine Co.
505 Front St., Albert Lea, Minn. p, F. A. Trow; R. A. Trow; s, t, C. E. Holmquist. Estab. 1896.

American Mohawk Co., Inc.
580 Hudson St., New York 14, N. Y. p, S. Klein; gm, Harry Londa. Estab. 1935.

American Radiator & Standard Sanitary Corp.
P. O. Box 1226, Pittsburgh 30, Pa. p, Theodore E. Mueller; executive vp, Joseph A. Grazier; vp, t, John E. King; vp, sm, D. D. Couch; s, Frank J. Berberich; am, R. W. Lear. Estab. 1899.

American Stove Co.
Lorain Div., 1200 Long Ave., Lorain, O.

Ames Iron Works
Div. of Pierce, Butler Radiator Corp., E. 2nd & Cayuga Sts., Oswego, N. Y.

Anchor Div.
Stratton & Terstegge Co., P. O. Box 311, New Albany, Ind. p, W. H. Terstegge; vp, M. V. Hodapp; s, P. A. Terstegge; t, F. J. Thoben; gm, E. M. Clifford; sm, J. L. Meagher; ce, J. W. Oeffinger; am, Bryant Doty. Estab. 1865.

Anthony Co.
47-33 Fifth St., Long Island City 1, N. Y. p, A. W. Morse; vp, ce, V. Singer; executive vp, t, gm, W. M. Roberts; s, E. B. Hallett. Estab. 1906.

Armstrong Furnace Co.
851 W. Third Ave., Columbus, O. and 1701 E. Euclid Ave., Des Moines, Ia. p, D. H. Kinnan; vp, L. G. Hickok (Columbus); vp, gm, F. W. Vaughn (Des Moines); t, J. W. Norland; gm, W. J. Olsen (Columbus); sm, H. G. Hays (Columbus) and George Zimbelman (Des Moines); factory mgr, N. H. Deck (Columbus); am, H. C. Galleher. Estab. 1927.

Arrow Petroleum Co.
4811 S. Harlem Ave., Clearing Station, Chicago 38, Ill. p, P. J. Healy; executive vp, gm, C. R. Jonswold; s, H. A. Baldwin; t, H. W. Boedeker; sm, M. A. Schneider. Estab. 1925.

Aston Products, Inc.
22084 Dequindre Ave., Warren Twp., Mich. p, t, ce, W. O. Smith; s, gm, William A. Dunneback.

Atlas Mfg. Corp.
1624 61st St., Brooklyn, N. Y. p, James J. Schwebel; gm, Louis Schwebel; sm, Phil Singer. Estab. 1936.

Auburn Burner Co.
512 So. Cedar St., Auburn, Ind. gm, H. C. McIntyre; sm, J. H. McIntyre. Estab. 1930.

Auburn Foundry, Inc.
Heating Div., 601 West Eleventh St., Auburn, Ind. sm, Jno. L. Orr; ce, H. H. Fitch. Estab. 1908.

Auto-Heat Corp.
Newfield St., Middletown, Conn. p, Otto B. Moody; vp, Otto B. Moody, Jr.; s, t, David Ahern. Estab. 1934.

Automatic Burner Corp.
1823 West Carroll Ave., Chicago 12, Ill. p, Joseph Hearst; vp, J. W. Hearst; s, Howard S. Fisher; t, Fred Schwartzstein; office mgr, Fred H. Deist, Jr.; sm, E. D. Carmien, ce, G. F. Kupel. Estab. 1920.

Automatic Firing Corp.
4417 Oleatha, St. Louis, Mo. p, Hugo Wurdack; vp, gm, Sidney Strauss; vp, sm, James J. Lee; s, t, E. Wurdack; ce, E. A. Kuhn. Estab. 1934.

Automx Utilities
449 Senator St., Brooklyn 20, N. Y.

Ballard Oil & Eqpt. Co.
135 Marginal Way, Portland, Me. p, t, gm, Edward P. Hacker; s, Frank P. Preti; sm, Ralph H. Dunton. Estab. 1925.

Robert Barclay, Inc.
122 North Peoria St., Chicago 7, Ill. p, t, M. K. Arenberg; s, L. Sisskind; sm, L. Felker; am, L. X. Frost. Estab. 1936.

Bard Mfg. Co.
Bryan, Ohio.

Barridon Oil Burner Corp.
1429 Park St., Hartford, Conn. p, t, sm, am, G. Levine; s, Benjamin M. Gold; gm, Harry Wolpoe; ce, J. Godfrey.

George R. Bascom Co., Inc.
950 Old Colony Parkway, Dorchester 22, Mass. p, Ida Isgur; gm, C. J. Ford; sm, Samuel Melnick. Estab. 1942.

Bastian-Morley Co., Inc.
Truesdell Ave., La Porte, Ind. p, J. P. Morley; vp, N. R. Feltes; s, R. A. Hunter; t, H. J. Kohne; gm, H. J. Rose; sm, F. M. Pain; ce, R. E. Reynolds; am, H. J. Morley. Estab. 1912.

Beall Pipe & Tank Corp.
12005 N. Burgard, Portland 3, Ore. p, t, J. E. Beall, vp, G. F. Beall; s, J. T. Pasquill; ass't mgr, E. L. Wilkins.

Beaver Mfg. Co.
617 S. W. 3rd Ave., Portland 4, Ore. p, Paul F. Amort; gm, D. D. Regula; sm, R. K. Kilmer. Estab. 1922.

Beck Eng. Combustion Co.
2100 Cole St., St. Louis 6, Mo.

R. W. Beckett Corp.
Elyria, O. p, R. W. Beckett. Estab. 1937.

Benner-Nawman, Inc.
3421 Hollis St., Oakland 8, Calif.

Berkley Mfg. Co.
2045 North 2nd St., Philadelphia, Pa. p, sm, David G. Trussell; vp, Joseph Basso; s, t, ce, Harry Friedman. Estab. 1950.

Besser Metal Products Corp.
754 Clement Ave., Charlotte, N. C. p, t, gm, Charles S. Besser; vp, Kenneth D. Williams; s, Hugh B. Campbell; sm, Edgar L. Jones; ce, Harry Kiser; am, Forest Collier. Estab. 1942.

W. N. Best Combustion Eqpt. Co., Inc.
411-15 Eleventh St., Carlstadt, N. J. p, Harry M. Stiehl, s, H. C. Lagreen; t, Patricia Frawley; gm, ce, Charles B. Weiler. Estab. 1890.

Bethlehem Foundry & Machine Co.
225 West Second St., Bethlehem, Pa. p, George A. Taylor, vp, Ernest H. Dimler and Robert W. Fluck, Sr.; s, t, Willard H. Moyer; sm, Raymond C. Dietz; ce, W. R. Smith; am, Martin H. Ritter. Estab. 1855.

Bettendorf Oil Burner Co.
1400 East Linn St., Marshalltown, Ia. p, John W. Norris; vp, t, Edward C. Booth; gm, Robert Lee; ce, Don H. Vreeland. Estab. 1927.

Beyer Oil Burner Co.
Rosamond, Calif. Charles E. Beyer and Edward T. Beyer, partners. Estab. 1928.

Bock Corp.
110 S. Dickinson St., Madison, Wis. p, O. P. Bock; vp, W. G. Polk; s, H. S. Bock. Estab. 1929.

Boston Machine Works Co.
Oil Heating Supplies Div., 7 Willow St., Lynn, Mass. p, Harry Atherton; s, Melville F. Weston; t, gm, Ralph H. Ellingworth; ce, W. P. Osgood; am, Ralph L. Dennis. Estab. 1895.

Braun Bros. Oil Co.
812 Oak St., Winnetka, Ill. p, Robert F. Doepel; vp, Charles Genge; sm, Robert Doepel, Jr. Estab. 1925.

Breese Burners, Inc.
P. O. Box 1458, Santa Fe, New Mexico. p, James L. Breese; vp, Troy L. Parker; executive vp, Henry R. Lanman; s, t, Corinne W. Madden; gm, Stanley Perry; ce, Milton D. Huston.

Brown Oil Burning Eqpt. Co.
312 Massachusetts Ave., Cambridge 39, Mass. p, gm, John C. Brown; ce, C. W. Mitchell. Estab. 1928.

Bryan Steam Corp.
P. O. Box 337, Peru, Ind. p, G. A. Bryan; s, N. P. Grumpp; gm, O. C. Skinner; ce, H. V. Koch, Estab. 1918.

Bryant Air Conditioning Corp.
35 East Poplar St., Philadelphia 23, Pa. p, J. M. Traugott; vp gm, George L. Miller; vp, sm, Burt England; vp, C. K. Nice and John Whipps; s, t, Mary Meyer; am, Joseph Green. Estab. 1924.

Bryant Heater Div.
Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10, O. gm, J. A. Hughes; sm, W. H. Wise; ce, L. P. Primosch; am, H. A. Kennedy. Estab. 1908.

Burnham Corp.
Boiler Div., Irvington, N. Y. p, Burnham Bowden; vp, V. A. Good; s, A. J. Hall; gm, A. E. Bastedo; sm, H. N. Jones; ce, A. G. Kalmes; am, F. R. Brophy.

Burn-Rite Products Co.
177 W. 1st St., Mt. Vernon, N. Y.

Caloroil Burner Corp.
850 Windsor St., Hartford, Conn. p, R. M. Sherman; vp, R. W. Secor; s, D. R. Sherman; t, R. J. Johnson. Estab. 1927.

Campbell Heating Co.
3121 Dean Ave., Des Moines 17, Ia. p, t, gm, Bowen Campbell; vp, s, Angus K. Campbell; sm, Elwood Arendts; ce, C. P. North; am, Crom Campbell. Estab. 1883.

E. K. Campbell Heating Co.
1606 Main St., Kansas City 8, Mo.

Campbell Machine Co.
2921 Stevens Ave., Minneapolis, Minn. Owner, Leonard E. Sicard. Estab. 1920.

Capson Co., Inc.
108 Rogers Ave., Brooklyn, N. Y. p, t, gm, Charles A. Pose; vp, Raymond J. Pose; s, Albert C. Pose. Estab. 1937.

Carlin Co.
River Road, Wethersfield 9, Conn. p, gm, B. C. Lindberg; vp, ce, J. E. Carlberg; s, E. A. Lindberg; ass't t, R. S. Booma; sm, am, B. J. Watling. Estab. 1949.

Cary Mfg. Co.
Churchill St., Waupaca, Wis. p, F. C. Cary; vp, Glydas B. Cary; s, t, Miss D. Nelson; sm, Wallace Barden. Estab. 1920.

Century Engineering Corp.
401 Third St., S. E., Cedar Rapids, Ia. p, E. J. Lattner; vp, B. J. Lattner; s, gm, K. W. Dunn; t, L. P. Davis; sm, am, W. S. Moellering; ce, E. A. Jones. Estab. 1927.

Certified Furnace Co.
Div. of Stainless & Steel Products Co., 1000 Berry Ave., St. Paul 4, Minn. p, P. W. Casey; vp, W. F. Casey; s, W. A. Morse; t, R. E. Martin; sm, am, W. W. Hutchins; ce, A. E. Bauer. Estab. 1913.

Chalmers Oil Burner Co.
312 Lumber Exchange Bldg., Minneapolis, Minn. gm, C. H. Chalmers. Estab. 1920.

Chandler Co.
804 First Ave., N. W., Cedar Rapids, Ia. p, gm, W. E. Dunshee; vp, sm, P. T. Chandler; s, t, ce, C. W. Chandler; am, John McKay. Estab. 1868.

Chicago Steel Furnace Co.
9326 So. Anthony Ave., Chicago, Ill. Owner, R. F. Leger. Estab. 1935.

Chimney Furnace Corp.
Box 386, Rockville, Md.

Cities Service Oil Co. (Pa.)
70 Pine St., New York, N. Y. p, gm, H. E. Brandli; vp for marketing, J. A. Kelley; s, R. A. Cuthbertson; t, W. W. Martin; am, R. C. Keck.

Citro Oil Burners Corp.
222 Lakeside Ave., Pompton Lakes, N. J. p, t, gm, ce, Dan Citro; vp, sm, am, Joseph P. Citro; s, R. Richardson. Estab. 1933.

Clayton & Lambert Mfg. Co.
1701 Dixie Highway, Louisville 10, Ky. p, Charles F. Lambert; vp, Philip O. Mulkey; s, t, Helen Ferguson; gm, Paul K. Wolfford; sm, Rowland Hiller; ce, Tom Hargreaves; am, Louis L. Lancaster. Estab. 1887.

Clayton Mfg. Co.
P. O. Box 550, El Monte, Calif. p, Willian Clayton, vp, gm, E. S. Chapman; s, t, J. E. St. Clair; sm, J. A. Cortright; ce, Perry Arant; am, C. L. Pfeiffer. Estab. 1932.

Cleaver-Brooks Co.
5100 N. 33rd St., Milwaukee 9, Wis. p, J. C. Cleaver; vp, F. W. Hainer; s, R. W. McKinnon; t, board chairman, R. E. Brooks; gm, J. V. Resek; ce, H. J. McCoy; am, F. A. Hopp. Estab. 1944.

Coen Co.
40 Boardman Pl., San Francisco 3, Calif.

Coleman Co., Inc.
2d & St. Francis Sts., Wichita, Kan. p, gm, Sheldon Coleman; s, J. H. Dye; t, C. B. Kuhn; sm, Carl Burrows; ce, Dean Olds; am, A. W. Boyer. Estab. 1900.

Columbia Boiler Co.
Pottstown, Pa. H. J. Loughney and F. I. Boarman, partners. Estab. 1936.

Combustioneer Div.
The Steel Products Eng. Co., 1205 W. Columbia St., Springfield, O. p, t, J. E. McAdams; executive vp, C. P. Meredith; s, R. B. Yirak; gm, Georges Roudanez; sm, H. E. McCampbell; ce, Del Getz. Estab. 1928.

Conco Engineering Works
Box 111, Mendota, Ill. p, H. D. Conkey; vp, W. G. Van Etten; t, J. P. Gallagher; ce, A. B. Carlson; am, R. W. McKenzie. Estab. 1910.

Concord Oil Corp.
One Bay Blvd., Lawrence, L. I., N. Y. p, Leon Steinberg; vp, Sidney S. Steinberg. Estab. 1932.

Connecticut Refining Co.
105 Water St., West Haven, Conn. p, Joseph F. Creamer; vp, Marvin R. Shiner; s, Gussie A. Shiner; t, gm, am, Irvin A. Shiner; sm, Alfred Yaccarino; ce, C. A. Polo. Estab. 1914.

Connecticut State Furnace Co., Inc.
340 Kossuth St., Bridgeport, Conn. p, Nicholas Cupole. Estab. 1947.

Consolidated Industries, Inc.
By-Pass 52, Lafayette, Ind.

Coroaire Heater Corp.
1422 Euclid Ave., Cleveland 15, O. p, Arthur W. Conley; vp, J. D. Conley; s, Gordon J. Berry.

Crane Co.
836 So. Michigan Ave., Chicago 5, Ill. p, J. L. Holloway; vp, C. T. Pollock. Estab. 1855.

Crotty Mfg. Corp.
133-15 35th Ave., Flushing 54, N. Y. p, Mary Crotty; s, Michael J. Mintern; t, Michael J. Crotty; sm, Alex C. Hart. Estab. 1938.

Crown Petroleum Corp.
92 Walnut St., Hartford, Conn. p, t, S. B. Wilkes; s, M. Hoberman; gm, sm, F. L. Kundahl; ce, H. Waterman; am, H. Arnold. Estab. 1930.

Cyclotherm Corp.
Oswego, N. Y.

Davis Engineering Co.
598 McLean Ave., Yonkers, N. Y. p, E. A. Davis; ce, N. H. Davis. Estab. 1936.

Day & Night Div.
Affiliated Gas Eqpt., Inc., 700 Royal Oaks Dr., Monrovia, Calif.

Delco Appliance Div.
General Motors Corp., 391 Lyell Ave., Rochester, N. Y. gm, P. H. Rutherford; gsm, A. C. Freimann; ce, H. C. Rohr; am, S. J. Rice. Estab. 1908.

D'Elia Oil Burner Co.
145 Stratford Ave., Bridgeport 8, Conn. p, Joseph A. D'Elia. Estab. 1926.

Delta Heating Corp.
One Cole St., Trenton, N. J. p, A. L. Nathan; vp, R. C. Hauck; gm, H. L. Lander.

Denver Fire Clay Co.
2301 Blake St., Denver 17, Colo. p, gm, J. Claire Evans; vp, s, R. C. Shepard; t, Robert G. Bosworth; sm, Carl L. Johnson; ce, Iver Wood; am, Stanley T. Ciborowski. Estab. 1876.

Des Moines Furnace & Stove Repair Co.
107 S. W. 2nd Ave., Des Moines 5, Ia. p, F. R. Green; vp, J. M. Green; s, F. L. Green. Estab. 1869.

DeSoto Oil Burner Co.
538 S. Queen St., York, Pa. Owner, E. I. Kraber, gm, Ivan E. Spangler. Estab. 1939.

Dewey-Shepard Boiler Co.
1311 No. Capitol Ave., Indianapolis, Ind. p, George D. Arnold; s, t, Jane Roller; sm, Robert B. Rhoads. Estab. 1935.

Diamond Instrument Co.
North Ave., Wakefield, Mass.

Diamond Iron Works, Inc.
1728 2nd St. N., Minneapolis, Minn. p, J. P. Blaul; vp, John Goss; s, t, R. A. Shave; sm, Jack Flood; heating engineer, Al Sonnack. Estab. 1880.

Diesel Burners Mfg. Co.
Main Street, Moosup, Conn. p, gm, William H. Speer; vp, Thomas L. Zimmerman; s, M. R. Strucken.

Diesel Oil Burner Corp. of New York
105-20 New York Blvd., Jamaica N. Y.

Domestic Mfg. Co.
201 Westlake No., Seattle, Wash. p, A. L. Willard; vp, Dick Willard; s, E. D. Willard. Estab. 1935.

Dowagiac Steel Furnace Co.
110 Beeson St., Dowagiac, Mich. p, G. D. Woodhouse; vp, gm, L. W. Silverthorn; s, t, A. W. Wick; sm, F. N. Parker; ce, E. S. Burch. Estab. 1927.

Dravo Corp.
Machinery Div., Heating Dept., 5th & Liberty Aves., Pittsburgh 22, Pa. gm, D. R. Berg; sm, W. L. Davidson; ce, H. A. Pietch.

David Duff & Son
640 Pleasant St., New Bedford, Mass. John Duff, Jr. and Mark M. Duff, partnership. Estab. 1887.

Duo-Therm Div.
Motor Wheel Corp., 111 W. Mt. Hope Ave., Lansing, Mich. p, J. E. Garlent; executive vp, gm, M. F. Cotes; s, E. K. Ellsworth; t, D. L. Porter; sm, K. Egeler; ce, D. F. Jones; am, G. B. York. Estab. 1927.

C. H. Dutton Co.
630 Gibson St., Kalamazoo 6, Mich.

East Coast Co.
141 Milk St., Boston 9, Mass. Owner, Eugene J. Street. Estab. 1943.

Eastern Fdry Co.
Boyertown, Pa.

Eckhart Mfg. Co., Inc.
931 Lehigh Ave., Union, N. J. p, t, Arnold Eckhart, Sr.; vp, Arnold Eckhart, Jr.; s, Walter E. Eckhart; gm, R. W. McMahon.

Eddy Stoker Corp.
4711 W. North Ave., Chicago 39, Ill. p, G. W. Graham. Estab. 1931.

Eds-Wil Burner Corp.
2656 Diversey Ave., Chicago, Ill. p, Edward C. Sternaman; sm, Arthur L. Griffen; ce, William R. Todd. Estab. 1923.

Electro-Watt, Inc.
Aurora at Mercer Sts., Seattle 9, Wash. p, gm, ce, Robert Denny Watt; vp, Mrs. Roberta F. Watt; s, t, S. J. Howell; manager, E. L. Comings; sm, Al Hedlund. Estab. 1932.

Electrol Burner Mfg. Co., Inc.
22 Union Ave., Rutherford, N. J. p, R. F. Andler; vp, H. T. Richardson; s, G. Roosma, Jr.; t, A. Sachman. Estab. 1926.

Engineer Co.
75 West St., New York 6, N. Y. p, gm, William J. Ruth; vp, C. B. Martin; s, Joseph P. Gorman; t, M. A. Ruth; ce, E. A. Holden. Estab. 1902.

Engineering Industries Co., Ltd.
650 Dupont St., Toronto, Ontario, Can. p, E. C. Scythes; vp, gm, am, E. H. McKinney; s, C. C. Calvin; t, G. S. Dodington; ce, A. W. Rae. Estab. 1946.

Enterprise Engine & Machinery Co.
Div. of General Metals Corp., 18th & Florida Sts., San Francisco 10, Calif. p, William E. Butts; vp, P. I. Birchard; s, W. E. Clayton, Jr.; t, R. C. Menzel; mgr, V. M. Douglas; ce, Leonard Mjolsnes; am, William F. Haddon. Estab. 1886.

Esso Standard Oil Co.
15 West 51st St., New York 19, N. Y. p, S. C. Hope.

Estate Stove Co.
Subsidiary of Noma Electric Corp., Hamilton, O. p, Henri Sadacca; vp, gm, Cecil M. Dunn; ass't t, controller, Gordon Kemp; sm, Gordon P. Hentz; ce, Ellsworth Simms; am, Lewis W. Selmeier. Estab. 1842.

Evans Products Co.
13101 Eckles Rd., Plymouth, Mich. p, E. S. Evans; gm, sm, George Faurie; ce, G. M. Schueder; am, Sam Hudson. Estab. 1923.

Ex Cel Co.
129 So. Front St., Dowagiac, Mich. sm, H. C. Torrey. Estab. 1946.

Excelsior Steel Furnace Co.
118 So. Clinton St., Chicago, Ill. p, A. B. Glessner; vp, H. W. Mitchell; s, sm, am, J. S. McDonald; t, H. C. Glessner. Estab. 1886.

Faber Engineering Co., Inc.
Amber & Westmoreland Sts., Philadelphia, Pa. p, L. H. Corlette; ce, H. A. Frey. Estab. 1927.

Fageol Heat Machine Co.
5725 Mt. Elliott Ave., Detroit 11, Mich.

Fairchester Oil Co., Inc.
84 So. Water St., Port Chester, N. Y. p, gm, C. A. Oettler; s, S. C. Binder; t, W. A. Oettler. Estab. 1927.

Fairfield Oil Heating Co., Inc.
20 Bridge St., Greenwich, Conn. p, gm, ce, Charles T. Robinson; vp, Henry C. Dreher; s, Irene M. Mahon; t, A. P. Mazza. Estab. 1925.

Fano-Flame Oil Burner Co.
3323 Olive St., Huntington Park, Calif. p, gm, sm, ce, am, August Behrsin; vp, R. Richey; s, A. Richey; t, L. Behrsin. Estab. 1916.

Farquhar Furnace Co.
230 Ownes Ave., Wilmington, O. p, C. L. Sapp; s, V. G. Marconett; ce, H. F. Farquhar. Estab. 1908.

Faultness Oil Burner Co.
113-29 Farmers Blvd., St. Albans, N. Y. p, John Hartmann; vp, Robert Hartmann. Estab. 1920.

Federal Boiler Co., Inc.
Granite and West Sts., Midland Park, N. J. p, J. H. Legg; vp, ce, R. McTaggart; s, gm, R. H. Bohr; t, sm, am, R. Shuster. Estab. 1946.

Federal Oil Burner Co., Inc.
3620 Walnut St., Philadelphia 4, Pa. p, W. A. P. Hemminger; vp, A. A. Abrahams; s, A. M. O'Brien. Estab. 1929.

Firewel Co.
3685 Broadway, Buffalo 21, N. Y.

Fitzgibbons Boiler Co.
101 Park Ave., New York 7, N. Y.

Flame-Master Co.
6651 N. Clark St., Chicago 26, Ill. p, Robert Walshin. Estab. 1950.

Florence Stove Co.
205 School St., Gardner, Mass. p, Robert H. Taylor; vp, George B. Colburn, W. T. MacKay and T. E. Keller; vp, sm, C. Fred Lucas; s, t, Albert E. Luke; ce, H. M. Reeves; am, Raymond B. Carey. Estab. 1874.

Fluid Heat Div.
Anchor Post Products, Inc., 6500 Eastern Ave., Baltimore 24, Md. p, W. F. Brannan; vp, C. W. Burton; s, G. B. Ferris; t, C. John Gross; gm, M. J. Donahue; sm, D. Grey Knowles; ce, D. L. Wooden; am, T. F. May. Estab. 1892.

Front Rank Mfg. Co.
2500 Ohio Ave., St. Louis 4, Mo. p, gm, William T. Mellow; vp, R. Wesley Mellow; s, t, George E. Mellow; sm, am, J. J. Walsh; ce, Ben H. Uthoff. Estab. 1886.

Fuel Savers, Inc.
1501 Herr St., Harrisburg, Pa. p, E. T. Selig; s, gm, H. J. Selig. Estab. 1926.

Gem Fuel Oil Burners
Frankfort, Ky. Owner, H. A. Gretter. Estab. 1912.

Gem Giant Oil Burner Co., Inc.
Box 186, Westmoreland, N. Y. p, Milo Whitney; vp, Glenn D. Spencer; s, Eugene Whitney; t, P. Swartzentruber. Estab. 1929.

General Automatic Products Corp.
2300 Sinclair Lane, Baltimore 13, Md. p, C. W. Schaefer; vp, C. E. Birch; s, J. R. Greene; t, R. E. Lee; sm, am, H. J. Hughes; ce, R. E. Nest. Estab. 1923.

General Electric Co.
Air Conditioning Div., 5 Lawrence St., Bloomfield, N. J. gm, air conditioning div., F. J. Van Poppelen; gm, home heating & cooling dept., S. J. Levine; mgr. sales planning, home heating & cooling dept., W. L. Sneltjes; ce, home heating & cooling dept., R. F. Hertel; am, air conditioning div., G. W. Hart. Estab. 1932.

General Heating Products Co.
1207 Hamilton St., Philadelphia 23, Pa.

General Machine Co., Inc.
Emmaus, Pa. p, Frederick Kalmbach; vp, M. Lindroth; s, E. W. Allwine; t, H. J. McCauley; sm, R. B. Sechrist; ce, Fred L. Hilder. Estab. 1907.

General Oil Heating Corp.
322-6 55th St., West New York, N. J. p, William D. Brooks; vp, William D. Brooks, Jr.; t, Jas. A. Brooks. Estab. 1924.

General Products Co.
P. O. Box 661, Fredericksburg, Va.

Gerstein & Cooper Co.
1 W. 3d St., S. Boston, Mass.

Gibraltar Corp. of America
223 N. 9th St., Brooklyn 11, N. Y.

Gilbert & Barker Mfg. Co.
Cold Spring Ave., West Springfield, Mass. p, P. H. Bills; executive vp, T. C. O'Donnell; vp, gsm, I. C. Jacobs; s, W. S. Hendry; t, E. A. Sundburg; ce, E. D. Rapisarda; am, R. B. White. Estab. 1865.

J. L. Gillen Co.
12202 Wormer Ave., Detroit 28, Mich. p, Harold Coon; vp, R. C. Champlin; s, t, Marvin Hahn; gm, R. C. Champlin. Estab. 1941.

Gold Star Oil Burner Mfg. Co., Inc.
146 Warburton Ave., Yonkers 2, N. Y. p, Felix Sposito; vp, Joseph Sposito; s, t, R. M. Sposito; sm, Felix J. Sposito, Jr. Estab. 1929.

Golden Flame Mfg. Co.
320-2 Line St., Camden 3, N. J. p, ce, Frank V. Gramenzi; vp, Joseph Gramenzi. Estab. 1946.

Goodrich Oil Burner Mfg. Corp.
106 Whalley Ave., New Haven, Conn. p, D. E. Goodrich; vp, t, W. E. Goodrich; s, C. Gaudreaux. Estab. 1930.

Gould Oil Burner Co.
107 Terrace St., Boston 20, Mass. p, t, R. Francis Regnier. Estab. 1932.

Grant Mfg. Corp.
825 Communipaw Ave., Jersey City, N. J. p, t, H. L. Wolf; vp, M. N. Wolf; s, B. V. Gaucher. Estab. 1926.

Gray & Dudley Co.
2300 Clifton Road, Nashville, Tenn. p, Foskett Brown; vp, J. B. Duke; vp, gm, R. E. Grimsley; vp, sm, W. T. Crockett; s, t, J. C. Lauderdale; ce, Earl Hart. Estab. 1862.

Green Colonial Furnace Co.
322 S. W. 3rd St., Des Moines, Ia. p, Wright C. Percival; vp, sm, L. F. Olive; s, Shirley Percival, Jr.; t, R. E. Taylor; ce, R. E. Dawson; am, Murray Goodman. Estab. 1869.

A. Greene Mfg. Co.
3409 N. Hutchinson St., Philadelphia, Pa. Owner, A. Greene. Estab. 1940.

Greene & Hodgson, Inc.
31 Commercial St., Providence 5, R. I. p, George W. Hodgson; t, Beatrice B. Hodgson. Estab. 1938.

Greenwood Eng. Co., Inc.
1023 Ridgely St., Baltimore 30, Md.

Hall-Neal Furnace Co.
1324 N. Capitol Ave., Indianapolis, Ind. p, t, Fred S. Boone; vp, s, Virginia H. Boone; sm, Fred S. Gombert; ce, Cornell Bodell. Estab. 1890.

Hanson-Gates Mfg. Co., Inc.
174 Lowell St., Reading, Mass. p, sm, Sherman R. Gates; t, J. W. Gates. Estab. 1928.

Hardinge Oil Burner & Mfg. Co.
1770 Berteau Ave., Chicago 13, Ill. p, Franklin Hardinge, Jr.; vp, s, gm, Einar Erickson; vp, t, Henri E. Nelson; sm, C. H. Rundquist. Estab. 1908.

Hart Heat Div.
Avery Farm Machinery Co., 2006 So. Washington St., Peoria 2, Ill. Owner, ce, Earl K. Smith; office mgr, P. C. Hanson. Estab. 1920.

C. T. Harvey
130 Cheyenne Trail, Portsmouth, Va. Owner, C. T. Harvey. Estab. 1949.

Sid Harvey, Inc.
Valley Stream, N. Y. p, Sid Harvey; vp, s, Lawrence Harvey; t, Leslie E. Lewis; gm, Joseph R. Ziminski; sm, Leslie Algar; ce, George Bernard; am, Howard Ruehl. Estab. 1931.

Harvey-Whipple, Inc.
2155 Columbus Ave., Springfield, Mass. p, gm, sm, Ray G. Whipple; vp, F. R. Swayne; vp, am, T. A. Hodgdon; s, t, Leonard F. Connor; gm, sm, Ray G. Whipple; ce, George Wood. Estab. 1922.

Hayward Mfg. Co., Inc.
505 Court St., Brooklyn 31, N. Y. p, J. M. Hayward; vp, A. G. Taylor; s, R. J. Lorton; t, W. H. Sedgwick. Estab. 1926.

***Heat, Inc.**
460 W. Larned St., Detroit 26, Mich. p, sm, P. S. Russell; vp, ce, George R. True; s, t, gm, Henry L'H. Russel. Estab. 1946.

**Heat Controller, Inc.*
Manitou Beach, Michigan. p, Paul Ningert. Estab. 1947.

Heatcraft Co.
419 W. Main St., Louisville, Ky. p. t, H. E. Culley; vp, Betty Bennett; s, Ella B. Culley. Estab. 1946.

Heating Eqpt. Mfg. Co.
600 Indiana St., San Francisco, Calif. p, Frederick L. Anderson; vp, John M. Baeza; gm, sm, G. W. Cheney; ce, E. J. Harris.

Heet-Master Products Co.
2251 Kirk Ave., Baltimore 18, Md. Owner, Eugene R. Brenaman. Estab. 1937.

Heil Co.
3000 W. Montana St., Milwaukee 1, Wis. p, t, J. F. Heil; vp, H. F. Falk; s, Allan Magee; sm, John Barclay; ce, A. Meyer; am, H. F. Pugh. Estab. 1901.

Henry Furnace Co.
Medina, Ohio.

Herco Oil Burner Corp.
109 W. Chestnut St., Lancaster, Pa. p, H. H. Wilkinson; vp, J. H. Stauffer; s, t, C. R. Herr. Estab. 1927.

Hershey Machine & Foundry Co.
Manheim, Pa. gm, S. E. Dyke; gsm, J. D. Wentz; ce, R. F. Loomis. Estab. 1900.

Hershner Mfg. Co.
1024 S. Edgar St., York, Pa. p, H. R. Hershner; s, Marie K. Hershner. Estab. 1950.

Hess Co.
1855 South 54th Ave., Cicero 50, Ill. p, B. M. Hess; vp, gm, R. B. Carr; vp, s, C. W. Hess; t, C. R. Abbott, Jr.; sm, A. L. Anderson; ce, R. A. Hess. Estab. 1873.

Holland Furnace Co.
Holland, Mich. p, gm, P. T. Cheff; vp, H. Weyenberg; s, W. H. Boer; t, G. B. Tinholt; sm, F. H. Ault; ce, R. H. Fehring; am, E. H. Moss. Estab. 1906.

Homease Products Co.
52 Iowa Ave., Paterson 3, N. J. p, t, Edward P. Schinman; s, A. L. Schinman; sm, Edward G. King; ce, W. S. Guttenberg. Estab. 1946.

Hopkins Volcanic Specialties, Inc.
1094 N. Union Ave., Alliance, O. p, Robert C. Hopkins; vp, t, James H. Hopkins; s, Mabel Valentine; sm, C. R. Hopkins, Jr.

Hotstream Heater Co.
2363 East 69th St., Cleveland, O. p, gm, L. R. Mendelson; vp, t, L. S. Berne; s, R. R. Mendelson; sm, George A. Short; ce, C. H. Morrow; am, R. J. Holkenburg. Estab. 1915.

Howell Engineering Corp.
P. O. Box 111, Oregon, Ill. p, H. A. Howell; vp, J. C. Reed; s, A. S. Bressler; t, gm, R. E. Bressler. Estab. 1940.

Hubbard Co.
1014 Marquette Ave., Minneapolis, Minn.

Hyle Oil Burner Co.
Frederick Rd. & Dutton Ave., Catonsville, Md.

Illinois Iron & Bolt Co.
914 So. Michigan Ave., Chicago, Ill.

Ingersoll Products Div.
Borg-Warner Corp., 760 East Vine St., Kalamazoo, Mich. p, R. S. Ingersoll; vp, gm, R. A. Anderson; sm, Frank J. Nugent; ce, C. M. Baker; am, W. D. Johnson. Estab. 1937.

International Heater Co.
101 Park Ave., Utica, N. Y. p, Harold F. Randolph; vp, Murray Wheeler and W. A. Matheson, Jr.; t, Donald G. Hoffman; sm, Irving C. Barber; ce, N. R. Foloky; am, Millar Wheeler. Estab. 1832.

International Oil Burner Co.
3800 Park Ave., St. Louis 10, Mo. p, S. J. Heiman; vp, T. L. Brown. Estab. 1933.

Iron Fireman Mfg. Co.
3170 West 106th St., Cleveland, O. Chairman, gm, W. J. O'Neil; vp for public relations, L. J. Cox; vp, t, F. S. Hecox; vp, sm, C. T. Burg; vp, ce, E. C. Webb; s, C. C. Craft; am, Dale Wylie. Estab. 1923.

Jackson & Church Co.
321 No. Hamilton St., Saginaw, Mich. chairman, D. L. Perrot; p, C. W. Stuart; vp, L. S. Redford and A. S. Sampierre; s, t, E. Knight; gm, Howard Beck; sm, F. C. Adams; ce, F. W. Hoye; am, S. T. Richards. Estab. 1881.

Jenkins Engineering Co.
518 Virginia St., Seattle 1, Wash. Owner, A. C. Jenkins; sm, E. E. Kreiter. Estab. 1920.

S. T. Johnson Co.
Oakland, Calif. and Philadelphia, Pa. p, gm, J. C. Johnson; vp, t, Led Jacobs; s, H. V. Flynn; sm, R. P. Johnston; ce, Alfred Dimick; am, Robert Stoops. Estab. 1904.

Johnson Heater Corp.
1 Winnisimmet St., Chelsea, Mass. p, N. B. Johnson; s, K. S. Johnson, Jr.; t, K. S. Johnson, Sr.; sm, A. H. Theg. Estab. 1947.

Johnston Brothers, Inc.
300 Pine St., Ferrysburg, Mich. p, vp, t, Jas. H. Johnston; sm, John F. Johnston, Jr.; ce, C. J. Walsh. Estab. 1864.

Jungers Stove & Range Co.
11th Ave., Grafton, Wis. p, gm, J. W. Jungers; vp, N. C. Jungers; s, W. F. Helm, t, ce, Sylvester Jungers; sm, R. O. Duerwachter. Estab. 1911.

Kalamazoo Stove & Furnace Co.
Kalamazoo, Mich. p, A. L. Blakeslee; vp, sm, C. C. Whitcomb; s, t, H. C. Buechner; ce, P. F. Barthold. Estab. 1901.

Karr Range Co.
7th & Harrison Sts., Belleville, Ill. p, gm, Edward P. Karr; vp, Adam A. Karr; s, t, sm, Joseph F. Karr; gm, Edward P. Karr; ce, H. T. Schmitt. Estab. 1924.

Kaustine Co., Inc.
Perry, N. Y. p, John B. Mollnow, Sr.; vp, John B. Mollnow, Jr. Estab. 1916.

Keil's
1000 E. 12th St., Wilmington, Del. p, Max Keil; vp, Leo Keil; s, Samuel Keil; t, Isadore Keil; gm, Harold Snyder; sm, Samuel Berry; ce, Sam Bagg; am, Saul Galperin. Estab. 1919.

Keith Furnace Co.
2601 Dean Ave., Des Moines, Ia. p, sm, am, John C. Rehmann; vp, E. K. Rehmann; s, John Keith Rehmann; ass't t, Robert Joynes; ce, E. F. Peek. Estab. 1889.

Kinsley Burner & Machine Co.
55 Sims Ave., Providence, R. I. t, I. S. Low. Estab. 1945.

Kleen-Heet, Inc.
1825 West Carroll Ave., Chicago 12, Ill. p, Joseph Hearst; vp, J. W. Hearst; s, Howard S. Fisher; t, Fred Schwartzstein; office mgr, Fred H. Deist, Jr.; sm, E. D. Carmien; ce, G. F. Kupel. Estab. 1930.

Kleer Kleen Mfg. Co.
901 72nd Ave., Oakland, Calif. p, s, am, Charles A. Curtiss; vp, t, Owen J. Eash; gm, sm, R. D. Fish; ce, Earl Sanders. Estab. 1940.

Knox Stove Works
Knoxville, Tenn. p, t, C. C. Bond; vp, s, W. P. Biddle. Estab. 1911.

Heat, Inc. is in the process of going out of business. For the protection of its customers, parts and service may be obtained from Pawlowski Bros., 5985 East 11 Mile Rd., Centerline, Mich.

Ko-Z-Aire Products, Inc.
401 W. Coolbaugh St., Red Oak, Ia. p, C. W. Burton; vp, John Case; s, John Gross; t, John Titus; sm, D. Grey Knowles; ce, Leslie Hart, am, R. T. Demarest. Estab. 1948.

Kresky Mfg. Co., Inc.
Second & H Sts., Petaluma, Calif. p, C. A. Miller; s, Earl Patterson; gm, Colin Holmes; sm, am, Howard J. Ferris; ce, B. Clyde Watts. Estab. 1911.

Kresno-Stamm Mfg. Co.
345 Commercial Ave., Palisades Park, N. J. p, B. I. Stamm; vp, sm, N. Fleisler; s, D. Cohen. Estab. 1944.

Laco Oil Burner Co., Inc.
Griswold, Ia. p, gm, ce, C. T. Cocklin; vp, s, t, sm, am, R. L. Cocklin. Estab. 1925.

Lammert & Mann Co.
Wood & Walnut Sts., Chicago 12, Ill. p, t, gm, R. F. Lammert; vp, D. E. Badgley; s, F. H. Byrne; sm, am, W. I. Hammack; ce, W. Richards. Estab. 1895.

Lamson Oil Corp.
355 Allens Ave., Providence 5, R. I. p, gm, R. T. Westmoreland, Jr.; vp, s, sm, James E. Leary; t, Joseph D. Miller; ce, William M. White. Estab. 1921.

Lancaster Heat Transfer Co., Inc.
123 DeKalb Ave., Brooklyn 1, N. Y. p, sm, N. A. Arvins; vp, R. A. Arvintz; s, t, A. A. Arvintz. Estab. 1945.

P. M. Lattner Mfg. Co.
Cedar Rapids, Ia. p, am, J. H. Bell; vp, s, B. P. Lattner; t, J. H. Bell, Jr.; ce, W. T. Taylor. Estab. 1917.

LaSalle Oil Burner Co., Inc.
3615 Stone Way, Seattle 3, Wash. p, W. L. Steele; sm, W. D. Howard. Estab. 1928.

Lee Eng. Co.
1001 Tatnall St., Wilmington, Del.

Leeson Air Conditioning Corp.
14631 Meyers Rd., Detroit 27, Mich.

Lennox Furnace Co.
Marshalltown, Ia. p, John W. Morris; s, t, E. C. Booth, ce, Ted Smoot; merchandising mgr, am, E. R. Champion.

H. C. Little Burner Co., Inc.
P. O. Box 60, San Rafael, Calif. p, gm, H. C. Little; s, Jordan L. Martinelli; t, Lemar L. Little; sm, am, Don Sutherland; ce, Lyle G. Sage. Estab. 1927.

Lonergan Mfg. Co.
704 N. Clark St., Albion, Mich. p, S. J. Lonergan, Sr.; S. J. Lonergan, Jr.; s, t, C. L. Targgart; gsm, M. H. Gwynn; ce, E. Kline; am, Jim Laundergan. Estab. 1937.

Long Mfg. Co., Inc.
Fairview Ave., Tarboro, N. C.

Loxaire Corp.
1725 Jefferson Ave., Tacoma, Wash. p, Donald H. Powers; vp, Olive Powers; s, John Hedrick; sm, Harry V. Smith. Estab. 1951.

Luty Furnace Mfg. Co.
8747 Lyndon Ave., Detroit 21, Mich. p, Donald J. Luty; vp, R. J. Reich. Estab. 1947.

Lynn Products Co.
17 Willow St., Lynn, Mass. p, sm, E. K. Priest; vp, ce, E. C. Leach; t, R. H. Illingworth. Estab. 1922.

McPherson Furnace & Supply Co.
P. O. Box 7706, Portland 12, Ore. p, t, gm, A. S. Weiant; vp, E. M. Morton; s, M. Lorenz; sm, D. M. Keefer. Estab. 1887.

MacLeod Co.
Bogen St., Cincinnati 22, O. p, E. F. Hoffman; vp, T. J. Hollmeyer.

Madsen Service
3549 Nicollet Ave., Minneapolis 8, Minn. Owner, Arnold Madsen; gm, R. E. Carlson; sm, M. H. Ingvaldson; ce, Lewis Madsen. Estab. 1941.

Magic Chef, Inc.
1641 S. Kingshighway, St. Louis 10, Mo. p, Arthur Stockstrom; vp for sales, Marc W. Pender; vp for mfg, George P. Eichelsback, Jr.; s, t, Clark P. Fiske; sm, A. R. Pierce; heater engineer, R. Johnson; am, Tom Gibbons. Estab. 1902.

Majestic Co., Inc.
245 Erie St., Huntington, Ind. p, K. F. Triggs; vp, gm, Don A. Purviance; s, Ray T. Lininger; t, O. K. Zeigler; sm, am, R. D. Hall; ce, Don Winegardner. Estab. 1907.

Major Oil Burner Co.
2123 N. Broad St., Philadelphia 22, Pa. p, W. H. Godrey; vp, W. W. Miller; gm, M. H. Rogers. Estab. 1926.

Malleable Iron Fittings Co.
Branford, Conn. p, T. F. Hammer; s, t, F. V. Bigelow; mgr, Oil Burner Div., H. M. Lang. Estab. 1864.

Mar-Coil Heater Co.
200 Paterson Plank Rd., Union City, N. J.

Marietta Metal Products Corp.
Marietta, Pa.

Marnis Oil Co., Inc.
255 Exterior St., New York 51, N. Y. p, Henry D. Sinram; vp, Ralph Sinram; s, t, Herbert G. Sinram; gm, Oscar E. Freitel. Estab. 1919.

Master Automatic Oil Burner Co.
Iowa & Division Sts., Kansas City 3, Kans. p, James H. Morris; s, F. L. Landis; gm, ce, Jess H. Landis.

Maxon Premix Burner Co.
P. O. Box 71, Muncie, Ind. p, gm, H. R. Maxon, Jr.; vp, sm, Lowell F. Crouse; s, t, H. M. Hays; ce, R. H. Yeo; am, Robert L. Manor. Estab. 1917.

May Oil Burner Div.
May Fuel Oil Corp., 1500 Russell St., Baltimore 30, Md.

Mayflower Air-Conditioners, Inc.
Duluth Ave. & E. Seventh St., St. Paul 6, Minn. p, C. O. Butler; vp, t, E. J. Davidson; s, C. H. Seidl; ce, J. M. Wilson; am, L. J. Payin. Estab. 1934.

Mayflower Fuel Oil Co.
6014 Hudson Blvd., West New York, N. J.

Mechanical Products Co.
1723 First Ave. So., Seattle 4, Wash. Owner, C. E. Schinman. Estab. 1927.

Messer Co., Inc.
629-31 Central Ave., Newark 7, N. J. p, George H. Messer; s, t, Henry C. Messer. Estab. 1925.

Merit Oil Heating Corp.
526 No. High St., Mt. Vernon, N. Y. p, Michael J. Verman; s, Rose Verman; ce, Arthur C. Beningson. Estab. 1939.

Metro Oil Burner Mfg. Co., Inc.
Glendale Village, Easthampton, Mass. p, R. Muszynski; t, ce, T. Muszynski. Estab. 1930.

Metromatic Oil Burner Co.
15 Henderson St., Everett, Mass. p, S. Santoro; s, gm, ce, B. W. Cosentino; t, am, F. DeAngelo; sm, R. Pyne. Estab. 1932.

Meyer Furnace Co.
1300 S. Washington St., Peoria 2, Ill.

Michigan Burner Co.
1839 Fitzpatrick Ave., Detroit 28, Mich. Owner, William C. Brown. Estab. 1922.

Michigan Tank & Heater Corp.
14247 Tireman Ave., Dearborn, Mich. p, J. J. Cheviron; vp, t, Charles A. Wagner; s, L. F. Hess; sm, am, E. J. Vallier; ce, H. C. Baity. Estab. 1922.

Middleton & Meads Co., Inc.
11 East Lee St., Baltimore 2, Md. p, T. Blair Middleton; s, Carlisle A. Middleton; gm, H. P. Johnson; sm, G. F. Wohlgemuth. Estab. 1926.

Miller Co.
99 Center St., Meriden, Conn. p, B. G. Tremaine, Jr.; vp, B. G. Tremaine III; s, t, W. H. Fitzpatrick; mgr, htg. prods. div., H. S. Beagle; ce, R. W. DeLancey; am, H. L. Harrison. Estab. 1844.

Milos System Devices
104 Lakeview Ave., Clifton, N. J. p, Lou Milos. Estab. 1931.

Modern Heat, Inc.
4415 Chestnut St., Philadelphia 4, Pa. p, H. D. Marks; s, G. H. Clement; t, R. H. Fleisher; sm, T. A. Harper. Estab. 1936.

Monarch Range Co.
715 N. Spring St., Beaver Dam, Wis. p, H. T. Burrow; vp, M. J. Maier; sm, C. A. Leisses; am, C. W. Haider. Estab. 1896.

Montag Stove & Furnace Works
2011 N. Columbia Blvd., Portland, Ore. gm, R. T. Montag, Sr.; sm, R. T. Montag, Jr.; ce, Don DeVine; am, A. W. Stremich. Estab. 1880.

Morheat Corp.
700 E. Kalamazoo St., Lansing 12, Mich.

Morrison Steel Products, Inc.
601 Amherst St., Buffalo 7, N. Y. p, Samuel Morrison; vp for advertising, M. J. Kohnstamm; vp for engineering, A. J. Harsch; vp for production, Isadore Morrison; s, t, C. O. Rainey; sm furnace div., John Farrar; ce, B. V. Ronco. Estab. 1912.

Mt. Hawley Mfg. Co.
Mt. Hawley Airport, Peoria 4, Ill. p, W. A. Hale; s, t, gm, J. W. Coxon. Estab. 1943.

L. J. Mueller Furnace Co.
2005 W. Oklahoma Ave., Milwaukee 15, Wis. p, t, H. P. Mueller; vp, P. F. Mausz; s, Leo Mann; sm, F. J. Nunlist; am, J. H. Rock. Estab. 1857.

J. F. Mulkey Co.
W. Eight Mile & Telegraph Rd., Detroit 19, Mich. p, t, gm, J. F. Mulkey; vp, sm, am, M. L. Nelson; s, E. D. King; ce, Sam Hyatt.

National Airoil Burner Co.
1284 E. Sedgley Ave., Philadelphia, Pa. p, gm, am, Edward P. Bailey; vp of production, John F. Straitz; vp of sales, s, sm, Walter A. Horko; t, Alfred C. Schnitzler; ce, John J. Griffin. Estab. 1912.

National Home Eqpt. Co.
50 Church St., New York 7, N. Y. gm, Charles P. Balsam. Estab. 1939.

National Oil Burner Co. of New York, Inc.
614 Bergen St., Brooklyn 17, N. Y.

National Oil Corp.
3rd & Maury Sts., Richmond, Va. gm, J. D. Lawrence, Jr. Estab. 1892.

National Radiator Co.
Johnstown, Pa. p, Robert S. Waters; vp for research, L. N. Hunter; vp for sales, C. M. Baumgardner; vp for mfg, B. T. Hain; s, R. W. Bolsinger; gm for mfg, E. D. Graham; ce, F. P. Jacobs; am, C. J. Philage. Estab. 1894.

Nesco, Inc.
201 No. Michigan Ave., Chicago, Ill. p, W. P. Howlett; vp, t, s, J. Howard; vp of mfg., Mel Maurer; vp. of barrel Div., T. Stinson; vp of sales, P. Hill; ce, R. Paddock; am, W. J. Freund. Estab. 1898.

Niagara Furnace Div.
Forest City Foundries Co., 2500 W. 27th St., Cleveland, O. p, William J. Strangward; vp, William P. Strangward; s, Don M. Marshman; t, W. C. Kremser; gm, C. F. Seelbach; sm, I. E. Seith; ce, R. H. Leisenheimer. Estab. 1891.

Norge Heat Div.
Borg-Warner Corp., 672 East Woodbridge, Detroit 26, Mich. p, C. S. Davis, Jr.; t, W. F. Krueger; sm, M. A. Straub. Estab. 1946.

Norse Boiler Co.
Stelton Rd., New Market, N. J.

North American Mfg. Co.
4455 East 71st St., Cleveland 2, O. p, gm, sm, N. H. Davies; vp, O. C. Bernhard; s, Z. D. Basset; t, G. R. Brown; ce, Otto Lutherer; am, C. W. Grimm. Estab. 1917.

Northern Controlled Heat Co., Inc.
555-7 Factory Sq., Watertown, N. Y. p, t, Frank W. Aikin; vp, C. T. Adams; s, Catherine L. Marra. Estab. 1917.

Northern New Jersey Oil Co.
369 Riverside Ave., Newark, N. J. p, t, H. R. Van Vleck; vp, Peter R. Van Vleck; s, gm, William B. Cross; sm, Joseph F. Downey. Estab. 1922.

Northern Steel & Stoker Corp.
3142 Prospect Rd., Peoria Heights 4, Ill.

Northwest Fdry & Furnace Co.
2345 S.E. Gladstone St., Portland 2, Ore. p, D. W. Stokes; vp, gm, W. R. Pindell; s, A. J. Christopherson; sm, R. A. Atkinson; ce, Herman Anders. Estab. 1922.

Northwest Mfg. Co.
556 Fifth Ave., Mitchell, S. D.

Northwest Metal Products, Inc.
55 Spokane St., Seattle 4, Wash. p, am, J. F. Parker; vp, A. F. Parker; s, Mrs. Rebecca Parker; t, Sam F. Parker; sm, V. R. Forgey; ce, Kurt Buesing. Estab. 1922.

Nu-Way Corp.
2416 4th Ave., Rock Island, Ill. p, William F. Klockau; vp, t, O. K. Gripple; s, M. L. Griffiths. Estab. 1921.

O'Halloran Industries
12305 Turner St., Detroit 4, Mich. p, E. P. O'Halloran; s, Miss F. Moore; gm, C. LaValley. Estab. 1939.

Oil-Elec-Tric Co.
1930 University Ave., St. Paul 4, Minn. Owner, Clark E. Johnson. Estab. 1928.

Oil Eqpt. Laboratories, Inc.
Bridge St., Elizabeth, N. J. p, John M. Wittke; vp, John E. Ayres. Estab. 1929.

Oilux Corp.
2200 Dwenger Ave., Fort Wayne 4, Ind.

C. A. Olsen Mfg. Co.
Elyria, O. p, C. A. Olsen; vp, sm, E. P. Hayes; s, E. C. Carlson; ce, E. R. Donne. Estab. 1939.

Arthur A. Olson & Co.
Court & Broad St., Canfield, O. p, Arthur A. Olson; vp, H. A. Tolerton; ce, E. A. Runge. Estab. 1948.

Oran Co.
2222 S. Third St., Columbus 7, O. p, gm, H. W. Kelly; vp, William Van Ness; s, t, George B. Marshall; sm, am, J. E. Ledger; ce, Raymond F. Durham. Estab. 1946.

Orr and Sembower, Inc.
Reading, Pa.

Overhead Heaters, Inc.
1612 Book Bldg., Detroit, Mich. p, T. E. Trese; vp, N. Trese; s, t, L. Lutty; gm, E. N. Wash; sm, L. Perron; ce, A. Zingg; am, E. C. Watkins. Estab. 1937.

Pacific Oil Co.
Fall River, Mass. p, William Durfee, Jr.; vp, gm, Robert L. Crawford; s, Albert Mobuck; t, Chester Canning; sm, am, Winston G. Springer; ce, Herbert S. Donovon. Estab. 1923.

Paragon Oil Burner Corp.
75 Bridgewater St., Brooklyn 22, N. Y.

Park Oil Burner Mfg.
New York & Absecon Blvd., Atlantic City, N. J. Owner, David Park. Estab. 1916.

J. V. Patten Co.
550 DeKalb Ave., Sycamore, Ill. p, ce, Don C. Patten; vp, s, t, John V. Patten; gm, C. A. Pearce; sm, A. B. Garman. Estab. 1900.

Peabody Engineering Corp.
580 Fifth Ave., New York 36, N. Y. p, Ernest H. Peabody; vp, gm, sm, Eric G. Peterson; vp, Charles B. Hill; s, H. Victor Crawford; t, Clarence A. Snider; ce, Albert P. Olches; am, Richard D. La Fond. Estab. 1920.

Penn Boiler & Burner Mfg. Corp.
Fruitville Rd., Lancaster, Pa.

Perfection Stove Co.
7609 Platt Ave., Cleveland 4, O. p, D. S. Smith; vp and director appliance sales, James H. Rasmussen; vp and director of engineering, Marc Resek; s, t, George McCuskey; am, J. M. Purdum. Estab. 1888.

Petro Div.
Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, O. chairman of the board, W. J. O'Neil; vp for sales, C. T. Burg; vp, t, F. S. Hecox; vp, ce, E. C. Webb; s, C. C. Craft; sm, Jess R. Crews; am, Dale Wylie.

Piatt Products Corp.
1149 So. Pennsylvania Ave., Lansing 4, Mich. p, gm, J. D. Montgomery; vp, Mrs. Barbara Piatt Hughes; s, t, N. V. Marin. Estab. 1934.

Pilgrim Oil Burner Co.
471-5 Windsor St., Hartford, Conn. sm, R. J. Wetstone. Estab. 1932.

Preferred Utilities Mfg. Corp.
1860 Broadway, New York 23, N. Y. p, Richard S. Bohn; vp, ce, G. W. Bohn; vp, J. S. Kaplan, M. Sherman and C. E. Shields; s, t, E. K. Haen. Estab. 1921.

Premier Furnace Co.
Dowagiac, Mich.

Prentiss Wabers Products Co.
Wisconsin Rapids, Wis. p, R. S. Wiltrout; vp, M. Woolf; s, t, A. E. Bark; gm, J. O. Ellis; sm, D. F. Abel; ce, K. S. Jenson. Estab. 1917.

Quaker Mfg. Co.
223 W. Erie St., Chicago 10, Ill. p, gm, A. T. Atwill; vp, s, t, H. J. Nelson; sm, O. B. Nelson; ce, J. N. Mathis. Estab. 1888.

Queen Stove Works, Inc.
910 Marshall Ave., Albert Lea, Minn. p, F. A. Trow; vp, R. A. Trow; s, t, C. E. Holmquist; sm, A. L. Johnson, Jr.; ce, Marcus Nelson; am, R. D. Putman. Estab. 1921.

Quiet Automatic Burner Corp.
33-35 Bloomfield Ave., Newark 4, N. J. p, t, ce, J. Gordon Kaveny; s, Ed Hill; am, Joseph Cudone. Estab. 1923.

Quiet-Heet Mfg. Corp.
135 N. J. Railroad Ave., Newark 5, N. J. p, S. L. Peters; vp, E. M. Peters; s, Burno Sachs; sm, H. M. Spitzer; ce, Paul Komroff. Estab. 1932.

Quincy Stove Mfg. Co.
825 So. Front St., Quincy, Ill. p, gm, H. J. Wilde; s, t, Florence M. Lange; sm, Herman D. Tow; ce, Howard E. Ginther. Estab. 1899.

Rackliffe Oil Co.
114 Franklin Sq., New Britain, Conn. p, t, Frank E. Rackliffe, Jr.; vp, gm, Everett M. Smith; s, Ethel A. Barnes; sm, ce, John A. Peterson; am, Gene Rackliffe. Estab. 1922.

Radiant-Aire Corp.
Arthur St., Michigan City, Ind. p, sm, am, W. F. Shaughnessy; vp, N. E. Whitney. Estab. 1946.

Radiant Utilities Corp.
8817 18th Ave., Brooklyn 14, N. Y. p, Jack Goldberg; s, Julius Goldberg; t, sm, am, Arthur Marcus. Estab. 1935.

Radiation Furnace Corp.
230 Bond St., Benton Harbor, Mich. p, ce, Sidney Volk; s, Robert Volk. Estab. 1913.

Ray Oil Burner Co.
1301 San Jose Ave., San Francisco 12, Calif. p, R. C. Westover, Jr.; vp, James McBride; s, R. A. Rothe; t, R. P. Paoli; factory mgr, Arthur E. Calmels; sm, Carl Draper; ce, R. B. Plass; am, G. A. Martin. Estab. 1872.

C. L. Rayfield Co.
2010 So. Halsted St., Chicago 8, Ill. p, S. E. Koplar; vp, C. L. Rayfield; s, t, gm, E. A. Freudiger; ce, Hugh Rayfield. Estab. 1936.

Red Triangle Heater Co.
Wausau, Wis. p, gm, Howard W. Miller; vp, ce, George Witt; s, t, sm, Lyle Miller. Estab. 1940.

Red Wing Oil Burner Co.
217 Mystic Ave., Medford, Mass.

Reif-Rexoil, Inc.
37 Carroll St., Buffalo 3, N. Y. p, A. F. Reif; vp, t, C. A. Reif; s, M. R. Reif. Estab. 1920.

Reliance Products Corp.
309 N. E. Davis St., Portland 14, Ore. p, Harry Chang; s, ce, Henry L. Burns. Estab. 1938.

Edw. Renneburg & Sons Co.
2639 Boston St., Baltimore 24, Md. p, t, John N. Renneburg; vp, gm, P. E. Kiefer; s, J. R. Stein; sm, W. D. Guiney; ce, E. J. Leister. Estab. 1874.

Republic Products Co.
7420 State Rd., Philadelphia 36, Pa.

Rheem Mfg. Co.
570 Lexington Ave., New York 22, N. Y. p, R. S. Rheem; vp, D. L. Rheem; s, Herbert E. Hall; t, G. M. Greenwood; sm, W. S. Goodfellow; am, Richard O. Pallin. Estab. 1925.

Richmond Radiator Co.
19 East 47th St., New York 17, N. Y. p, John J. Hall; vp, gm, C. W. Farrar; s, A. Dillard; t, M. H. Temple; sm, J. E. Sargeant; ce, E. T. Selig; am, Edwin Reichert. Estab. 1867.

W. S. Rockwell Co.
200 Eliot St., Fairfield, Conn. p, Charles B. Kentnor, Jr.; vp, ce, H. J. N. Voltmann; s, John E. Baird; t, R. R. Snyder; sm, F. K. Whiteside. Estab. 1888.

Rossoe Mfg. Co.
413 Fairview Ave. N., Seattle 9, Wash.

Thomas D. Russo, Inc.
75 Bradeen St., Boston 31, Mass. p, gm, Joseph F. Walsh; t, John A. Griffin. Estab. 1933.

Rybolt Heater Co.
615 Miller St., Ashland, O. p, T. M. Rybolt; vp, s, C. E. Rybolt; t, E. E. Ensminger; gm, C. J. Stewart; sm, L. L. Groff; am, J. M. Gapstur. Estab. 1916.

S-K Co., Inc.
Admiral Wilson Blvd., Camden, N. J. p, Fred W. Scheifele; s, Sam Scriboni. Estab. 1921.

Safety Products Co.
975 Main St., Brockton, Mass. p, Joseph Giardino; vp, Salvadore Giardino; s, Rose Giardino; t, John Giardino; gm, Eldon Evans; sm, Nelson Detorge; ce, Philip Tower; am, Thomas Hickey. Estab. 1929.

Sam-Bee Burner Co.
510 East Victoria St., South Bend 14, Ind. p, gm, ce, Samuel Klute; vp, s, t, sm, am, B. Klute. Estab. 1949.

St. Louis Furnace Mfg. Co.
2710 North 25th Street, St. Louis, Mo.

Sandberg Mfg. Co.
3850 N. W. Yeon Ave., Portland, Ore. p, t, H. J. Sandberg; vp, gm, C. C. Smith; s, Morgan R. Luhr. Estab. 1947.

Schurs Oil Burner Co.
8500 Zamore Ave., Los Angeles 1, Calif. p, B. Christian Berg; s, Mildred A. Cansmoe; sm, Maurice H. Johnson. Estab. 1905.

Schwab Safe Co.
Main St., Lafayette, Ind. p, Mrs. E. V. Loeffler; vp, Robert Byrne; s, gm, C. E. Mann; sm, E. W. Memering; ce, William F. Dobelbower. Estab. 1867.

Scott-Newcomb, Inc.
41 Berry Oaks, St. Louis 19, Mo. p, t, gm, L. L. Scott; vp, sm, J. T. Scott; ce, Charles Atkinson. Estab. 1932.

Selectrol Eng. Co.
2036 McDonald Ave., Brooklyn 23, N. Y.

Shephard Heater Co.
951-999 Sycamore St., Terre Haute, Ind.

Siegler Enamel Range Co.
Wilson Ave., Centralia, Ill. p, Raymond J. Siegler; vp, Otto Siegler; s, t, gm, Eugene G. Siegler; sm, Walter G. Ullmann; ce, Paul Lunkwicz; am, Norman E. Grandt. Estab. 1921.

Siemon Mfg. Co.
1819 Holmes St., Kansas City 8, Mo. p, R. H. Siemon; vp, sm, M. J. Murray; s, John Douglass; t, Charles D. Jones; ce, John Johns. Estab. 1946.

Sigwald Eng. Co.
2937 4th Ave. So., Minneapolis, Minn. p, Richard A. Coffin; vp, George Coffin; s, James F. Coffin; ce, C. Rice. Estab. 1940.

Silent Flame Mfg. Co.
807 Zerega Ave., New York 72, N. Y.

Silent Glow Oil Burner Corp.
850 Windsor St., Hartford, Conn. p, R. M. Sherman. Estab. 1924.

Silent Sioux Corp.
208 College Ave., Orange City, Ia. p, J. T. Grotenhouse; vp, sm, am, Dwight N. Grotenhouse; s, gm, D. M. Jurriaans; t, E. G. Grotenhouse; ce, A. Hancock. Estab. 1929.

Silver Heat Oil Burner Co.
1010 So. 60th St., W. Philadelphia 43, Pa. Owner, A. B. Corey. Estab. 1921.

Simplex Oil Heating Corp.
7901 Oxford Ave., Philadelphia 11, Pa. p, J. E. Finegan; vp, t, E. W. Sweigart; s, C. E. Finegan; gm, G. O'Connor; sm, ce, J. F. Wade; am, T. Itri. Estab. 1908.

Sinclair Refining Co.
600 Fifth Ave., New York, N. Y. p, P. C. Spencer; vp for mkting, Ernest L. Hughes; vp & gsm, C. F. McGoughran; s, O. M. Gerstung; t, W. F. Dau; ce, C. M. Larson; am, J. J. Delaney. Estab. 1916.

H. B. Smith Co., Inc.
57 Main St., Westfield, Mass. p, S. K. Smith; vp, G. W. Roraback and F. A. Ferguson; s, sm, am, J. E. Reed; t, A. L. Lawrence. Estab. 1853.

Sorenson-Vana Corp.
1234 S. 13th St., Omaha 5, Nebr.

Spark Stove Co.
2619 East 12th St., Oakland, Calif.

Staffco Engineering Corp.
6600 So. Austin Ave., Chicago 38, Ill. p, ce, Fred Ravnsbeck; vp, t, J. S. Schurman; s, Norma Ravnsbeck; sm, W. F. Arnold. Estab. 1931.

Standard Arcoil Corp.
21-23 Broad St., Newark, N. J. p, H. D. Steinmark. Estab. 1927.

Standard Heating Eqpt. Co.
1406 E. 4th St., Waterloo, Ia. p, s, t, Joseph F. Hacker. Estab. 1945.

Standard Utilities Corp.
47 Stanton St., Newark 5, N. J. p, M. H. Garfunkle. Estab. 1938.

Standard-Yne Service, Inc.
332 Grand Ave., Brooklyn 5, N. Y.

Staples & Peiffer
528 Bryant St., San Francisco, Calif. D. J. Staples & M. J. Staples, partners; s, C. Goghlan; gm, D. J. Staples; ce, C. J. Kinnison. Estab. 1906.

Steel Products, Inc.
105 Water St., West Haven, Conn. p, gm, sm, Irvin A. Shiner; vp, Gussie A. Shiner; s, t, Leon M. Gabriel; ce, C. A. Polo. Estab. 1940.

Stewart Oil Burner Co.
218 Franklin St., Hanover, Pa. p, gm, S. S. Flickinger; t, J. D. Flickinger. Estab. 1928.

Stutzman Oil Burner Co.
27 Albert Ave., Aldan, Clifton Heights, P. O., Pa. Owner, A. A. Stutzman. Estab. 1929.

Sunbeam Oil Burner Mfg. Corp.
1455 Blondell Ave., Bronx, N. Y. p, Jules Turet. Estab. 1946.

Sundstrand Engineering Co.
1325 Seventh St., Rockford, Ill. p, t, R. H. Gustafson; vp, S. H. Henrikson; s, Ralph S. Zahm. Estab. 1921.

Sunland Refining Corp.
P. O. Box 1512, Fresno, Calif. p, G. A. Olsen; s, L. G. Kohler. Estab. 1923.

Sun-Ray Burner Mfg. Corp.
139-24 Queens Blvd., Jamaica, N. Y. p, Gabe M. Marin; gm, Alfred Metzger; ce, Alfred N. Luft. Estab. 1935.

Super Oil Heater Co.
942 New Britain Ave., Hartford, Conn. p, gm, George Hulme, Jr.; s, Thomas Varley, Jr.; t, sm, John C. Hulme. Estab. 1930.

Superior Combustion Industries, Inc.
1475 Broadway, New York, N. Y. p, J. F. Melzer; vp, G. E. DeSiena. Estab. 1946.

Sure Heat Stove Co., Inc.
Plano, Tex. p, K. J. Carter; vp, H. L. Bingman; s, L. J. Carter; sm, Jack Carter; ce, L. P. Carter. Estab. 1945.

Surface Combustion Corp.
2375 Dorr St., Toledo 1, O. p, gm, Frank H. Adams; vp for sales, C. B. Phillips; s, t, A. J. Buckenmyer; gsm, Robin A. Bell; sm, H. C. Gurney; dir. of mkting; W. J. Grover.

Swirling Oil Burner Mfg. Corp.
22-15 37th Ave., Long Island City, N. Y. p, J. C. Donella; gm, sm, A. R. Birkins; ce, R. E. Doyle. Estab. 1948.

Syncromatic Corp.
1014 10th St., Watertown, Wis. p, gm, R. C. Jaye; vp, sm, am, H. M. Stillman; s, Stewart Schilling; t, ce, J. F. Hirtz. Estab. 1931.

Thatcher Furnace Co.
Garwood, N. J.

Therm Gas Generator Co., Inc.
2105 Westlake Ave., Seattle, Wash. p, gm, sm, am, A. Johnson; vp, Don Walley; s, t, Clyde Risk; ce, Reuben Nystrand. Estab. 1918.

Thermobloc Div.
Prat-Daniel Corp., So. Norwalk, Conn. gm, E. M. Tarnoff; ce, R. F. Sharon; am, E. P. Pearsall. Estab. 1948.

Thermo-Products, Inc.
North Judson, Ind. p, J. S. Cunningham; vp, sm, E. B. Goodwin; s, t, M. R. Cunningham; c, H. M. Pugh. Estab. 1946.

Timken Silent Automatic Div.
Timken-Detroit Axle Co., 209 E. Washington St., Jackson, Mich. p, Walter F. Rockwell; vp, gm, T. A. Crawford; s, S. W. Warner; t, A. I. Hawkins; merchandising mgr, R. M. Marberry; ce, E. H. Haugen; am, H. R. Cook. Estab. 1925.

Titusville Iron Works Div.
Struthers Wells Corp., So. Franklin St., Titusville, Pa. p, J. T. Dillon; gm, G. O. Gondree; sm, A. E. Jennings; ce, A. W. Burnite. Estab. 1860.

Tjernlund Mfg. Co.
2140 Kasota Ave., St. Paul 8, Minn. p, ce, E. J. Tjernlund; vp, E. A. Olson; s, t, sm, am, R. L. Tjernlund. Estab. 1938.

Todd Shipyards Corp.
Combustion Eqpt. Div., 81-16 45th Ave., Elmhurst, New York. gm, R. W. Bowes; sm, F. K. Steinrock.

Toridheet Div.
Cleveland Steel Products Corp., 7306 Madison Ave., Cleveland 2, O. p, W. J. Smith; vp, ce, W. J. Smith, Jr.; vp, A. G. Singler and W. W. Slaght; s, N. F. Kaplan; t, J. H. Seager; gm, sm, R. J. Lucas; am, L. F. Dienst. Estab. 1923.

Tower Mfg. Corp.
222 Summer St., Boston, Mass. Estab. 1932.

Tri-Boro Combustion Corp.
614 Bergen St., Brooklyn, N. Y. p, sm, E. Wolf; vp, am, P. Wolf; t, gm, ce, M. Wolf. Estab. 1935.

Tru-Heet Co.
532 Miller Ave., Trenton, N. J. p, Henry Wurfel, Jr.; gm, Henry E. Wurfel. Estab. 1928.

Twin Control Burner Mfg. Co.
c/o Anthony J. Sbare, 3240 Barker Ave., New York 67, N. Y. Owner, Anthony J. Sbare. Estab. 1951.

U. S. Machine Corp.
320 No. C St., Lebanon, Ind. p, t, Carl J. Winkler; executive vp, Herman E. Winkler; vp for sales, t, Claude A. Potts; sm, Walter E. Blake; ce, Howard F. Murphy; sm, Norman J. Gill. Estab. 1937.

United States Radiator Corp.
300 Buhl Bldg., Detroit 26, Mich. p, Wesley J. Peoples; vp, H. B. Steggall, A. F. Westerfield and M. H. Knowles; vp, s, John C. Haas; gm, J. R. Knot; sm, E. J. Grady; ce, A. A. Emerick; am, T. F. Gessner. Estab. 1891.

United Stove Co.
Ypsilanti, Mich. p, E. Q. Smithing; vp, G. A. Weins; s, t, J. Beswetherick; gm, R. G. Ferguson; sm, F. A. Dando; ce, F. W. Fagle. Estab. 1926.

Utica Structural Steel, Inc.
2104 Dwyer Ave., Utica 1, N. Y.

V&E Products, Inc.
Liberty St., Schuylkill Haven, Pa. p, George E. Valentine; vp, Lionel L. Jacobs; s, t, Joseph H. Eubanks. Estab. 1920.

Vapofier Corp.
10316 S. Throop St., Chicago 43, Ill. p, G. C. Mosley; gm, T. F. Kunst; W. J. Siegel. Estab. 1930.

Victor Oil Burner Mfg. Co.
250 Pleasant St., Hartford, Conn. p, gm, Robert L. Blumberg; s, sm, A. Singer; t, A. B. Grobard. Estab. 1932.

Viking Mfg. Corp.
1747 Chester Ave., Cleveland 14, O. p, H. S. Frasher; s, W. R. Frasher; t, Albert G. Moore; sm, M. C. Cameron; ce, T. L. Hildreth. Estab. 1933.

Viking Oil Co.
2482 W. Capitol Drive, Milwaukee, Wis. Owner, gm, E. E. Hess; ce, John Nauwan. Estab. 1930.

Volcano Burner Corp.
3612 E. Tremont Ave., New York, New York. p, Ernest Camerino; s, William Camerino; t, Vincent Camerino; gm, William J. Coyle. Estab. 1930.

Waltham Oil Burner Co.
1214 Bennington St., E. Boston, Mass. Owner, Stanley C. Paterson; sm, S. T. Campbell, Jr.

Washington Stove Works
P. O. Box 919, Everett, Wash. p, t, Earle M. Mackey; vp, gm, William L. Mackey; s, Laura L. Mackey; sm, J. C. Lewis. Estab. 1903.

Waterfilm Boilers
Div. of L. O. Koven Bros., Inc., 154 Ogden, Jersey City, N. J.

Waterman-Waterbury Co.
1121 Jackson St., N. E., Minneapolis 13, Minn. p, gm, David E. Sedgwick; vp for purchasing, Ralph E. Neil; vp for production; Roy E. Lonson, vp, t, B. O. Schwarz; s, sm for distributor div., Stuart A. Smith; sm for dealer div., T. J. Delaney; ce, Otto Griefnow. Estab. 1907.

Wayne Home Eqpt. Co., Inc.
801 Glasgow Ave., Fort Wayne 4, Ind. p, t, gm, N. G. Berghoff; vp, sm, am, B. G. Duer; s, Leon Baker; ce, C. V. Copeland. Estab. 1923.

Weatherall Engineers, Inc.
387 Charles St., Providence 4, R. I. p, P. W. Chadwell; vp, t, E. E. White; s, L. S. Walling; sm, W. L. Cummings; ce, C. N. Sutton. Estab. 1928.

Elisha Webb & Son Co.
136 S. Front St., Philadelphia 6, Pa. p, J. Hampton Webb; s, L. E. Oldfield; t, A. B. Simon. Estab. 1894.

West Coast Quiet Heet, Inc.
1530 N. E. Grand Ave., Portland, Ore. p, gm, Mel Peters; s, Arnold Fosters; sm, Rod C. Cain. Estab. 1947.

Westchester Home Eqpt. Co., Inc.
432 Austin Place, New York, N. Y. p, ce, Herbert H. Mesinger; gm, sm, John Ryan; Estab. 1926.

Westcott-Alexander, Inc.
42 Park Ave., Madison, N. J.

White Fuel Corp.
900 East First St., So. Boston, Mass. p, John P. Birmineham. Estab. 1952.

Wilgus Mfg. Co.
1772 East 16th St., Los Angeles 21, Calif. p, W. A. Wilgus, Jr.; s, t, J. D. Wilgus; gm, J. G. McCargar. Estab. 1900.

Will-Burt Co.
Orrville, O. p, B. G. Cope; vp, t, gm, E. G. Baer; s, sm, am, R. W. McFadden; ce, William Baer. Estab. 1894.

Williams Bros. & Miller, Inc.
619 W. Chicago Ave., East Chicago, Ind. p, t, D. W. Williams; vp, F. W. Williams; s, W. L. Mille; ce, James Retchless. Estab. 1925.

Williams Oil-O-Matic Div.
Eureka Williams Corp., 1201 East Bell St., Bloomington, Ill. p, H. W. Burritt; vp, gm, C. S. Stackpole; s, G. W. Phister; t, D. W. Haven; sm, E. H. Davison; ce, R. C. Osborn; am, A. L. Agne. Estab. 1925.

Williamson Heater Co.
4558 Marburg Ave., Cincinnati 9, Ohio.

Wilson Stove & Mfg. Co., Inc.
Box 187, Metropolis, Ill. p, C. T. Houghten; s, Levi C. Miller; t, L. W. Sturgis; gm, John W. Guice. Estab. 1892.

Winston Co.
165 Nye Ave., Newark, N. J. p, Sol Winston; t, I. M. Winston; sm, Charles Fuchs. Estab. 1946.

Wisconsin Oil Burner Co.
1134 Regent St., Madison 5, Wis. p, Sam C. Olson; vp, Walter A. Dengel; s, t, gm, am, John C. Westmont; sm, George A. Westmont; sales engineer; Stanley R. Himsel. Estab. 1927.

E. L. Woolley Co.
60 Dunnell Lane, Pawtucket, R. I. p, s, E. L. Woolley; t, J. W. Tingley; ce, T. Swaine.

XXth Century Heating & Ventilating Co.
96 Ira Ave., Akron 1, Ohio.

York-Shipley, Inc.
York, Pa. p, S. H. Shipley; executive vp, L. H. Brenneman; vp, ce, C. H. Neiman; vp for production, J. Kearns; s, t, D. D. Barbor; am, David Wepman. Estab. 1918.

John Zink Burner Co.
4401 S. Peoria, Tulsa, Okla.

ZYX, Inc.
50 Bridge St., Brooklyn 1, N. Y. p, Paul Traub. Estab. 1946.

Part II. Companies classified by types of Equipment

OILBURNERS, DISTILLATE

Atomizing vertical rotary

Hardinge Oil Burner & Mfg. Co., Chicago 13, Ill.
Hayward Mfg. Co., Inc., Brooklyn 31, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Macleod Co., Cincinnati 22, O.

High pressure, gun

Acme Heat & Power, Inc., Brooklyn, N. Y.
Acme Oil Burner Co., Inc., Cedar Rapids, Ia.
Acme Tool & Gauge Co., Providence 4, R. I.
Airflame, Waukegan, Ill.
Airtemp Div., Dayton 1, O.
Alan Distributors, Inc., Worcester, Mass.
Aldrich Co., Wyoming, Ill.
Allied Eng. Co., Allston, Mass.
American Crop Drying Eqpt. Co., Crystal Lake, Ill.
American Mohawk Co., Inc., New York 14, N. Y.
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Arrow Petroleum Co., Chicago 38, Ill.
Aston Products, Inc., Warren Twp., Mich.
Atlas Mfg. Corp., Brooklyn, N. Y.
Auburn Burner Co., Auburn, Ind.
Auto-Heat Corp., Middletown, Conn.
Automatic Burner Corp., Chicago 12, Ill.
Automatic Firing Corp., St. Louis, Mo.
Automx Utilities, Brooklyn 20, N. Y.
Ballard Oil & Eqpt. Co., Portland, Me.
Robert Barclay, Inc., Chicago 7, Ill.
George R. Bascom Co., Inc., Dorchester 22, Mass.
R. W. Beckett Corp., Elyria, O.
Berkley Mfg. Co., Philadelphia, Pa.
Bethlehem Fdry. & Machine Co., Bethlehem, Pa.
Bettendorf Oil Burner Co., Marshalltown, Ia.
Braun Bros. Oil Co., Winnetka, Ill.
Brown Oil Burning Eqpt. Co., Cambridge, Mass.
Bryan Steam Corp., Peru, Ind.
Bryant Air Conditioning Corp., Philadelphia 23, Pa.
Bryant Heater Div., Cleveland 10, O.
Burn-Rite Products, Mt. Vernon, N. Y.
Caloroil Burner Corp., Hartford, Conn.
Campbell Machine Co., Minneapolis, Minn.
Capson Co., Brooklyn, N. Y.
Carlin Co., Wethersfield 9, Conn.
Cary Mfg. Co., Waupaca, Wis.
Century Eng. Corp., Cedar Rapids, Ia.
Certified Furnace Co., St. Paul 4, Minn.
Chalmers Oil Burner Co., Minneapolis, Minn.
Chandler Co., Cedar Rapids, Ia.
Cities Service Oil Co. (Pa.), New York, N. Y.
Citro Oil Burners Corp., Pompton Lakes, N. J.
Coleman Co., Inc., Wichita, Kan.
Columbia Boiler Co., Pottstown, Pa.
Combustioneer Div., Springfield, O.
Conco Eng. Works, Mendota, Ill.
Concord Oil Corp., Lawrence, N. Y.
Connecticut Refining Co., West Haven, Conn.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago 5, Ill.
Crown Petroleum Corp., Hartford, Conn.
Davis Eng. Co., Yonkers, N. Y.
Delco Appliance Div., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
Des Moines Furnace & Stove Repair Co., Des Moines 5, Ia.
DeSoto Oil Burner Co., York, Pa.
Dewey-Shepard Boiler Co., Indianapolis, Ind.
Diamond Instrument Co., Wakefield, Mass.
Diamond Iron Works, Inc., Minneapolis, Minn.
Diesel Burners Mfg. Co., Moosup, Conn.
Diesel Oil Burner Corp. of New York, Jamaica 5, N. Y.
Domestic Mfg. Co., Seattle, Wash.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
David Duff & Son, New Bedford, Mass.
East Coast Co., Boston 9, Mass.
Eckhart Mfg. Co., Inc., Union, N. J.
Eddy Stoker Corp., Chicago 39, Ill.
Eds-Wil Burner Corp., Chicago, Ill.
Electro-Watt, Inc., Seattle 9, Wash.

Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Enterprise Engine & Machinery Co., San Francisco 10, Calif.
Esso Standard Oil Co., New York 19, N. Y.
Ex Cel Co., Dowagiac, Mich.
Excelsior Steel Furnace Co., Chicago, Ill.
Fairchester Oil Co., Inc., Port Chester, N. Y.
Fairfield Oil Heating Co., Inc., Greenwich, Conn.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Farquhar Furnace Co., Wilmington, O.
Faultless Oil Burner So., St. Albans, N. Y.
Federal Boiler Co., Inc., Midland Park, N. J.
Federal Oil Burner Co., Inc., Philadelphia 4, Pa.
Flame Master Co., Chicago 26, Ill.
Fluid Heat Div., Baltimore 24, Md.
Front Rank Mfg. Co., St. Louis 4, Mo.
Fuel Savers, Inc., Harrisburg, Pa.
General Automatic Products Corp., Baltimore 13, Md.
General Machine Co., Inc., Emmaus, Pa.
General Oil Heating Corp., West New York, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gold Star Oil Burner Mfg. Co., Inc., Yonkers 2, N. Y.
Golden Flame Mfg. Co., Camden 3, N. J.
Goodrich Oil Burner Mfg. Corp., New Haven, Conn.
Green Colonial Furnace Co., Des Moines, Ia.
A. Greene Mfg. Co., Philadelphia, Pa.
Greene & Hodgson, Inc., Providence 5, R. I.
Greenwood Eng. Co., Inc., Baltimore 30, Md.
Gould Oil Burner Co., Boston 20, Mass.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hanson-Gates Mfg. Co., Inc., Reading, Mass.
Hardinge Oil Burner & Mfg. Co., Chicago 13, Ill.
Hart Heat Div., Peoria 2, Ill.
Sid Harvey, Inc., Valley Stream, N. Y.
Harvey-Whipple, Inc., Springfield, Mass.
Hayward Mfg. Co., Inc., Brooklyn 31, N. Y.
Heatcraft Co., Louisville, Ky.
Heet-Master Products Co., Baltimore 18, Md.
Heil Co., Milwaukee 1, Wis.
Herco Oil Burner Corp., Lancaster, Pa.
Hershey Machine & Fdry. Co., Manheim, Pa.
Hershner Mfg. Co., York, Pa.
Holland Furnace Co., Holland, Mich.
Homease Products Co., Paterson, N. J.
Howell Eng. Corp., Oregon, Ill.
Hubbard Co., Minneapolis, Minn.
Hyle Oil Burner Co., Catonsville, Md.
Illinois Iron & Bolt Co., Chicago, Ill.
Ingersoll Products Div., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
Jenkins Eng. Co., Seattle 1, Wash.
S. T. Johnson Co., Oakland, Calif.
Keil's, Wilmington, Del.
Keith Furnace Co., Des Moines, Ia.
Kinsley Burner & Machine Co., Providence, R. I.
Kleen-Heat, Inc., Chicago 12, Ill.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Laco Oil Burner Co., Inc., Griswold, Ia.
Lamson Oil Corp., Providence 5, R. I.
La Salle Oil Burner Co., Inc., Seattle 3, Wash.
Lennox Furnace Co., Marshalltown, Ia.
Lynn Products Co., Lynn, Mass.
McPherson Furnace & Supply Co., Portland 12, Ore.
Macleod Co., Cincinnati 22, O.
Madsen Service, Minneapolis 8, Minn.
Majestic Co., Inc., Huntington, Ind.
Major Oil Burner Co., Philadelphia 22, Pa.
Malleable Iron Fittings Co., Branford, Conn.
Mar-Coil Heater Co., Union City, N. J.
Marnis Oil Co., Inc., New York 51, N. Y.
Master Automatic Oil Burner Co., Kansas City 3, Kan.
May Oil Burner Div., Baltimore 30, Md.
Mayflower Air-Conditioners, Inc., St. Paul 6, Minn.
Mechanical Products Co., Seattle 4, Wash.
Merit Oil Heating Corp., Mt. Vernon, N. Y.
Messer Co., Inc., Newark 7, N. J.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
Milos System Devices, Clifton, N. J.
Modern Heat, Inc., Philadelphia 4, Pa.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Steel Products, Inc., Buffalo 7, N. Y.
Mt. Hawley Mfg. Co., Peoria 4, Ill.
L. J. Mueller Furnace Co., Milwaukee 15, Wis.
National Airoil Burner Co., Philadelphia, Pa.
National Home Eqpt. Co., New York 7, N. Y.
National Oil Corp., Richmond, Va.
National Radiator Co., Johnstown, Pa.
Niagara Furnace Div., Cleveland, O.
Norge Heat Div., Detroit 26, Mich.
North American Mfg. Co., Cleveland 2, O.
Northern New Jersey Oil Co., Newark, N. J.
Northwest Fdry & Furnace Co., Portland 2, Ore.
Nu-Way Corp., Rock Island, Ill.
Oil-Elec-Tric Co., St. Paul 4, Minn.
Oil Eqpt. Laboratories, Inc., Elizabeth, N. J.
C. A. Olsen Mfg. Co., Elyria, O.
Arthur A. Olson & Co., Canfield, O.
Pacific Oil Co., Fall River, Mass.
Paragon Oil Burner Corp., Brooklyn 22, N. Y.
Park Oil Burner Mfg., Atlantic City, N. J.
Penn Boiler & Burner Mfg., Lancaster, Pa.
Petro Div., Cleveland 11, O.
Pilgrim Oil Burner Co., Hartford, Conn.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Quiet-Heet Mfg. Corp., Newark 5, N. J.
Rackliffe Oil Co., New Britain, Conn.
Radiant-Aire Corp., Michigan City, Ind.
Ray Oil Burner Co., San Francisco 12, Calif.
C. L. Rayfield Co., Chicago 8, Ill.
Red Wing Oil Burner Co., Medford, Mass.
Reif-Rexoil, Inc., Buffalo 3, N. Y.
Rossoe Mfg. Co., Seattle 9, Wash.
Thomas D. Russo, Inc., Boston 31, Mass.
Rybolt Heater Co., Ashland, O.
S-K Co., Inc., Camden, N. J.
Sandberg Mfg. Co., Portland, Ore.
Schurs Oil Burner Co., Los Angeles 1, Calif.
Schwab Safe Co., Lafayette, Ind.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Selectrol Eng. Co., Brooklyn 23, N. Y.
Siemon Mfg. Co., Kansas City 8, Mo.
Sigwald Eng. Co., Minneapolis, Minn.
Silent Flame Mfg. Co., New York 72, N. Y.
Silent Glow Oil Burner Corp., Hartford, Conn.
Simplex Oil Heating Corp., Philadelphia 11, Pa.
Sinclair Refining Co., New York, N. Y.
Sorensen-Vana Corp., Omaha 5, Nebr.
Standard Arcoil Corp., Newark, N. J.
Standard-Yne Service, Inc., Brooklyn 5, N. Y.
Steel Products, Inc., West Haven, Conn.
Stewart Oil Burner Co., Hanover, Pa.
Sunbeam Oil Burner Mfg. Corp., Bronx, N. Y.
Sundstrand Eng. Co., Rockford, Ill.
Sunland Refining Corp., Fresno, Calif.
Sun-Ray Burner Mfg. Corp., Jamaica, N. Y.
Super Oil Heater Co., Hartford, Conn.
Swirling Oil Burner Mfg. Corp., Long Island City, N. Y.
Syncromatic Corp., Watertown, Wis.
Timken Silent Automatic Div., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul 8, Minn.
Todd Shipyards Corp., Elmhurst, N. Y.
Toridheet Div., Cleveland 2, O.
Tru-Heet Co., Trenton, N. J.
Twin Control Burner Mfg. Co., New York 67, N. Y.
U. S. Machine Corp., Lebanon, Ind.
U. S. Radiator Corp., Detroit 26, Mich.
Viking Oil Co, Milwaukee, Wis.
Volcano Burner Corp., New York, N. Y.
Waltham Oil Burner Co., E. Boston, Mass.
Wayne Home Eqpt. Co., Inc., Fort Wayne 4, Ind.
Weatherall Eng., Inc., Providence 4, R. I.
Westchester Home Eqpt. Co., Inc., New York, N. Y.
West Coast Quiet Heet, Inc., Portland, Ore.
White Fuel Corp., So. Boston, Mass.
Will-Burt Co., Orrville, O.
Williams Oil-O-Matic Div., Bloomington, Ill.
Winston Co., Newark, N. J.
Wisconsin Oil Burner Co., Madison 5, Wis.
York-Shipley, Inc., York, Pa.

Horizontal rotary cup

Caloroil Burner Corp., Hartford, Conn.
Eds-Wil Burner Corp., Chicago, Ill.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Iron Fireman Mfg. Co., Cleveland, O.
S. T. Johnson Co., Oakland, Calif.
Lancaster Heat Transfer Co., Inc., Brooklyn 1, N. Y.
Macleod Co., Cincinnati 22, O.
National Oil Burner Co. of New York, Inc., Brooklyn 17, N. Y.
Pacific Oil Co., Fall River, Mass.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Ray Oil Burner Co., San Francisco 12, Calif.
Simplex Oil Heating Corp., Philadelphia 11, Pa.
Staffco Eng. Corp., Chicago 38, Ill.
Todd Shipyards Corp., Elmhurst, N. Y.
Tri-Boro Corp., Brooklyn, N. Y.
U. S. Machine Corp., Lebanon, Ind.
Williams Oil-O-Matic Div., Bloomington, Ill.
York-Shipley, Inc., York, Pa.

Low pressure, gun

Airflame, Waukegan, Ill.
Campbell Machine Co., Minneapolis, Minn.

Combustioneer Div., Springfield, O.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Hart Heat Div., Peoria 2, Ill.
Macleod Co., Cincinnati 22, O.
Marnis Oil Co., Inc., New York 51, N. Y.
Pacific Oil Co., Fall River, Mass.
Safety Products Co., Brockton, Mass.
Schurs Oil Burner Co., Los Angeles 1, Calif.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Todd Shipyards Corp., Elmhurst, N. Y.
U. S. Machine Corp., Lebanon, Ind.
Viking Mfg. Corp., Cleveland 14, O.
Weatherall Eng., Inc., Providence 4, R. I.

Pot, vaporizing

Allen Mfg. Co., Inc., Nashville 1, Tenn.
Beyer Oil Burner Co., Rosamond, Calif.
Breese Burners, Inc., Santa Fe, New Mexico
Brown Oil Burning Eqpt. Co., Cambridge, Mass.
Cary Mfg. Co., Waupaca, Wis.
Century Eng. Corp., Cedar Rapids, Ia.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago 5, Ill.
Delco Appliance Div., Rochester, N. Y.
Domestic Mfg. Co., Seattle, Wash.
Hall-Neal Furnace Co., Indianapolis, Ind.
Holland Furnace Co., Holland, Mich.
Ingersoll Products Div., Kalamazoo, Mich.
Iron Fireman Mfg. Co., Cleveland, O.
Kleer Kleen Mfg. Co., Oakland, Calif.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Laco Oil Burner Co., Inc., Griswold, Ia.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Lonergan Mfg. Co., Albion, Mich.
Michigan Burner Co., Detroit 28, Mich.
Miller Co., Meriden, Conn.
Northwest Mfg. Co., Mitchell, S. D.
Northwest Metal Products, Inc., Seattle 4, Wash.
Norge Heat Div., Detroit 26, Mich.
Oran Co., Columbus 7, O.
Prentiss Wabers Products Co., Wisconsin Rapids, Wis.
Quaker Mfg. Co., Chicago 10, Ill.
Safety Products Co., Brockton, Mass.
Sam-Bee Oil Burner Co., South Bend 14, Ind.
Siegler Enamel Range Co., Centralia, Ill.
Silent Sioux Corp., Orange City, Ia.
Standard Utilities Corp., Newark 5, N. J.
Sunland Refining Corp., Fresno, Calif.
Super Oil Heater Co., Hartford, Conn.
U. S. Machine Corp., Lebanon, Ind.

Shell, vaporizing

Automatic Burner Corp., Chicago 12, Ill.
Auto Heat Corp., Middletown, Conn.
Caloroil Burner Corp., Hartford, Conn.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Lynn Products Co., Lynn, Mass.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
O'Halloran Industries, Detroit 4, Mich.
Pacific Oil Co., Fall River, Mass.
Pilgrim Oil Burner Co., Hartford, Conn.
Silent Glow Oil Burner Corp., Hartford, Conn.
Super Oil Heater Co., Hartford, Conn.
Tower Mfg. Corp., Boston, Mass.
Winston Co., Newark, N. J.

Wall-flame vertical rotary

Crown Petroleum Corp., Hartford, Conn.
Fluid Heat Div., Baltimore 24, Md.
Pacific Oil Co., Fall River, Mass.
Safety Products Co., Brockton, Mass.
Timken Silent Automatic Div., Jackson, Mich.
Toridheet Div., Cleveland 2, O.
Viking Oil Co., Milwaukee, Wis.

OILBURNERS, RESIDUAL

High pressure, industrial type

Airflame, Waukegan, Ill.
Alan Distributors, Inc., Worcester, Mass.
Aldrich Co., Wyoming, Ill.
American Mohawk Co., Inc., New York 14, N. Y.
Anchor Div., New Albany, Ind.
Anthony Co., Long Island City 1, N. Y.
Aston Products, Inc., Warren Twp., Mich.
Atlas Mfg. Corp., Brooklyn, N. Y.
Auto Heat Corp., Middletown, Conn.
Automatic Burner Corp., Chicago 12, Ill.
Ballard Oil & Eqpt. Co., Portland, Me.
Robert Barclay, Inc., Chicago 7, Ill.
George R. Bascom Co., Inc., Dorchester 22, Mass.
Beaver Mfg. Co., Portland 4, Ore.
R. W. Beckett Corp., Elyria, O.
Berkley Mfg. Co., Philadelphia, Pa.
W. N. Best Combustion Eqpt. Co., Inc., Carlstadt, N. J.
Bryant Air Conditioning Corp., Philadelphia 23, Pa.
Burnham Corp., Irvington, N. Y.
Campbell Heating Co., Des Moines 17, Ia.
Carlin Co., Wethersfield 9, Conn.
Century Eng. Corp., Cedar Rapids, Ia.
Certified Furnace Co., St. Paul 4, Minn.
Chalmers Oil Burner Co., Minneapolis, Minn.
Columbia Boiler Co., Pottstown, Pa.
Concord Oil Corp., Lawrence, N. Y.
Connecticut State Furnace Co., Inc.
Delco Appliance Div., Rochester, N. Y.
D'Elia Oil Burner Co., Bridgeport 8, Conn.
DeSoto Oil Burner Co., York, Pa.
Dewey-Shepard Boiler Co., Indianapolis, Ind.
Diamond Iron Works, Inc., Minneapolis, Minn.
Diesel Burners Mfg. Co., Moosup, Conn.
C. H. Dutton Co., Kalamazoo 6, Mich.
Eddy Stoker Corp., Chicago 39, Ill.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Engineer Co., New York 6, N. Y.
Faber Eng. Co., Inc., Philadelphia, Pa.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Faultless Oil Burner Co., St. Albans, N. Y.
Fluid Heat Div., Baltimore 24, Md.
Gem Fuel Oil Burners, Frankfort, Ky.
General Automatic Products Corp., Baltimore 13, Md.
General Machine Co., Inc., Emmaus, Pa.
General Oil Heating Corp., West New York, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gold Star Oil Burner Mfg. Co., Inc., Yonkers 2, N. Y.
Goodrich Oil Burner Mfg. Corp., New Haven, Conn.
Greene & Hodgson, Inc., Providence 5, R. I.
Hart Heat Div., Peoria 2, Ill.
Hayward Mfg. Co., Inc., Brooklyn 31, N. Y.
Heatcraft Co., Louisville, Ky.
Heet-Master Products Co., Baltimore 18, Md.
Herco Oil Burner Corp., Lancaster, Pa.
Hershner Mfg. Co., York, Pa.
Homease Products Co., Paterson, N. J.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
Kinsley Burner & Machine Co., Providence, R. I.
Kleen-Heet, Inc., Chicago 12, Ill.
Laco Oil Burner Co., Inc., Griswold, Ia.
Madsen Service, Minneapolis 8, Minn.
Marnis Oil Co., Inc., New York 51, N. Y.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
Metromatic Oil Burner Co., Everett, Mass.
Montag Stove & Furnace Works, Portland, Ore.
Mt. Hawley Mfg. Co., Peoria 4, Ill.
National Airoil Burner Co., Philadelphia, Pa.
Niagara Furnace Div., Cleveland, O.
Nu-Way Corp., Rock Island, Ill.
Oil Eqpt. Laboratories, Inc., Elizabeth, N. J.
Pacific Oil Co., Fall River, Mass.
Park Oil Burner Mfg. Atlantic City, N. J.
Quiet Automatic Burner Corp., Newark 4, N. J.
Radiant Utilities Corp., Brooklyn 14, N. Y.
Ray Oil Burner Co., San Francisco 12, Calif.
Thomas D. Russo, Inc., Boston 31, Mass.
S-K Co., Inc., Camden, N. J.
Schurs Oil Burner Co., Los Angeles 1, Calif.
Schwab Safe Co., Lafayette, Ind.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Siemon Mfg. Co., Kansas City 8, Mo.
Sigwald Eng. Co., Minneapolis, Minn.
Silver Heat Oil Burner Co., W. Philadelphia 43, Pa.
Standard Arcoil Corp., Newark, N. J.
Staples & Pfeiffer, San Francisco, Calif.
Stewart Oil Burner Co., Hanover, Pa.
Stutzman Oil Burner Co., Aldan, Clifton Heights P. O., Pa.
Todd Shipyards Corp., Elmhurst, New York
Toridheet Div., Cleveland 2, O.
Twin Control Burner Mfg. Co., New York 67, N. Y.
U. S. Machine Corp., Lebanon, Ind.
U. S. Radiator Corp., Detroit 26, Mich.
Viking Oil Co., Milwaukee, Wis.
Volcano Burner Corp., New York, N. Y.
Waltham Oil Burner Co., E. Boston, Mass.
Wayne Home Eqpt. Co., Inc., Fort Wayne 4, Ind.
Weatherall Eng., Inc., Providence 4, R. I.
West Coast Quiet Heet, Inc., Portland, Ore.
White Fuel Corp., So. Boston, Mass.
Will-Burt Co., Orrville, O.
Williams Oil-O-Matic Div., Bloomington, Ill.
Wisconsin Oil Burner Co., Madison 5, Wis.

Horizontal rotary cup, air driven

Fano-Flame Oil Burners Co., Huntington Park, Calif.
Johnston Bros., Inc., Ferrysburg, Mich.
Lancaster Heat Transfer Co., Inc., Brooklyn 1, N. Y.
National Oil Burner of New York, Inc., Brooklyn 17, N. Y.
York-Shipley, Inc., York, Pa.

Horizontal rotary cup, motor driven

Ace Engineering Co., Chicago 8, Ill.
W. N. Best Combustion Ept. Co., Inc., Carlstadt, N. J.

Chalmers Oil Burner Co., Minneapolis, Minn.
C. H. Dutton Co., Kalamazoo 6, Mich.
Eds-Wil Burner Corp., Chicago, Ill.
Enterprise Engine & Machinery Co., San Francisco 10, Calif.
Esso Standard Oil Co., New York 19, N. Y.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Federal Oil Burner Co., Inc., Philadelphia 4, Pa.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Iron Fireman Mfg. Co., Cleveland, O.
S. T. Johnson Co., Oakland, Calif.
Johnston Bros,, Inc., Ferrysburg, Mich.
Lancaster Heat Transfer Co., Inc., Brooklyn 1, N. Y.
National Airoil Burner Co., Philadelphia, Pa.
National Oil Burner of New York, Inc., Brooklyn 17, N. Y.
Petro Div., Cleveland 11, O.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Ray Oil Burner Co., San Francisco 12, Calif.
C. L. Rayfield Co., Chicago 8, Ill.
Reif-Rexoil, Inc., Buffalo 3, N. Y.
Safety Products Co., Brockton, Mass.
Simplex Oil Heating Corp., Philadelphia 11, Pa.
Silver Heat Oil Burner Co., W. Philadelphia 43, Pa.
Steel Products, Inc., West Haven, Conn.
Superior Combustion Industries, Inc., New York, N. Y.
Todd Shipyards Corp., Elmhurst, N. Y.
Tri-Boro Combustion Corp., Brooklyn, N. Y.
U. S. Machine Corp., Lebanon, Ind.
Westchester Home Eqpt. Co., Inc., New York, N. Y.
Williams Bros. & Miller, Inc., East Chicago, Ind.
York-Shipley, Inc., York, Pa.

Horizontal rotary cup, steam driven

Fano-Flame Oil Burners Co., Huntington Park, Calif.
Ray Oil Burner Co., San Francisco 12, Calif.

Low pressure, industrial type

Airflame, Waukegan, Ill.
Anthony Co., Long Island City, N. Y.
W. N. Best Combustion Eqpt. Co., Inc., Carlstadt, N. J.
Cleaver-Brooks Co., Milwaukee 9, Wis.
Coen Co., San Francisco 3, Calif.
Eds-Wil Burner Corp., Chicago, Ill.
Fano-Flame Oil Burners Co., Huntington Park, Calif.
Hopkins Volcanic Specialties, Inc., Alliance, O.
Marnis Oil Co., Inc., New York 51, N. Y.
National Airoil Burner Co., Philadelphia, Pa.
O'Halloran Industries, Detroit 4, Mich.
C. L. Rayfield Co., Chicago 8, Ill.
W. S. Rockwell Co., Fairfield, Conn.
Safety Products Co., Brockton, Mass.
Schurs Oil Burner Co., Los Angeles 1, Calif.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Simplex Oil Heating Corp., Philadelphia 11, Pa.
Stutzman Oil Burner Co., Aldan, Clifton Heights P. O., Pa.
Todd Shipyards Corp., Elmhurst, N. Y.
Williams Oil-O-Matic Div., Bloomington, Ill.

Steam or air atomizing

Anthony Co., Long Island City 1, N. Y.
W. N. Best Combustion Eqpt. Co., Inc., Carlstadt, N. J.
Coen Co., San Francisco 3, Calif.
Engineer Co., New York 6, N. Y.
Faber Eng. Co., Inc., Philadelphia, Pa.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Federal Oil Burner Co., Inc., Philadelphia 4, Pa.
S. T. Johnson Co., Oakland, Calif.
Lammert & Mann Co., Chicago 12, Ill.
National Airoil Burner Co., Philadelphia, Pa.
North American Mfg. Co., Cleveland 2, O.
Edw. Renneburg & Sons Co., Baltimore 24, Md.
W. S. Rockwell Co., Fairfield, Conn.
Simplex Oil Heating Corp., Philadelphia 11, Pa.
Staples & Pfeiffer, San Francisco, Calif.
Todd Shipyards Corp., Elmhurst, N. Y.
Wilgus Mfg. Co., Los Angeles 21, Calif.
E. L. Woolley Co., Pawtucket, R. I.
John Zink Burner Co., Tulsa, Okla.

RANGES, OILFIRED

Commercial, mech. oilburner

S. T. Johnson Co., Oakland, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Michigan Burner Co., Detroit 28, Mich.
Monarch Range Co., Beaver Dam, Wis.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Ray Oil Burner Co., San Francisco 12, Calif.
Sunland Refining Corp., Fresno, Calif.
Todd Shipyards Corp., Elmhurst, New York
U. S. Radiator Corp., Detroit 26, Mich.
Washington Stove Works, Everett, Wash.
Elisha Webb & Son Co., Philadelphia 6, Pa.

Commercial, pot burner

Fano-Flame Oil Burner Co., Huntington Park, Calif.
Kleer Kleen Mfg. Co., Oakland, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Michigan Burner Co., Detroit 28, Mich.
Safety Products Co., Brockton, Mass.
Sunland Refining Corp., Fresno, Calif.
Viking Mfg. Corp., Cleveland 14, O.
Washington Stove Works, Everett, Wash.
Elisha Webb & Son Co., Philadelphia 6, Pa.

Commercial, shell burner

Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Safety Products Co., Brockton, Mass.
Victor Oil Burner Mfg. Co., Hartford, Conn.
Washington Stove Works, Everett, Wash.

Domestic, mech. oilburner

Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Therm Gas Generator Co., Inc., Seattle, Wash.
U. S. Radiator Corp., Detroit 26, Mich.

Domestic, pot burner

American Stove Co., Lorain, O.
Beall Pipe & Tank Corp., Portland 3, Ore.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Kleer Kleen Mfg. Co., Oakland, Calif.

Knox Stove Works, Knoxville, Tenn.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Safety Products Co., Brockton, Mass.
Sam-Bee Oil Burner Co., South Bend 14, Ind.
Therm Gas Generator Co., Inc., Seattle, Wash.
Washington Stove Works, Everett, Wash.

Domestic, shell burner

Barridon Oil Burner Corp., Hartford, Conn.
Florence Stove Co., Gardner, Mass.
Knox Stove Works, Knoxville, Tenn.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Magic Chef, Inc., St. Louis 10, Mo.
Michigan Burner Co., Detroit 28, Mich.
Perfection Stove Co., Cleveland 4, O.
Pilgrim Oil Burner Co., Hartford, Conn.
Safety Products Co., Brockton, Mass.
Tower Mfg. Corp., Boston, Mass.
Victor Oil Burner Mfg. Co., Hartford, Conn.

BOILER-BURNER UNITS

Hot water, high pressure burner

Acme Heating Div., West Hartford, Conn.
Airflame, Waukegan, Ill.
Airtemp Div., Dayton 1, O.
Alan Distributors, Inc., Worcester, Mass.
Aldrich Co., Wyoming, Ill.
American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa.
Anchor Div., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Auto-Heat Corp., Middletown, Conn.
Bethlehem Fdry. & Machine Co., Bethlehem, Pa.
Brown Oil Burning Eqpt. Co., Cambridge, Mass.
Bryan Steam Corp., Peru, Ind.
Bryant Air Conditioning Corp., Philadelphia 23, Pa.
Burnham Corp., Irvington, N. Y.
Century Eng. Corp., Cedar Rapids, Ia.
Cleaver-Brooks Co., Milwaukee 9, Wis.
Columbia Boiler Co., Pottstown, Pa.
Crown Petroleum Corp., Hartford, Conn.
Cyclotherm Corp., Oswego, N. Y.
Delco Appliance Div., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
DeSoto Oil Burner Co., York, Pa.
Dewey-Shepard Boiler Co., Indianapolis, Ind.
Diesel Oil Burner Corp. of New York, Jamaica 5, N. Y.
C. H. Dutton, Kalamazoo 6, Mich.
Eastern Fdry Co., Boyertown, Pa.
Eckhart Mfg. Co., Inc., Union, N. J.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Eng. Industries Co., Ltd., Toronto, Ontario, Can.
Esso Standard Oil Co., New York 19, N. Y.
Fairchester Oil Co., Inc., Port Chester, N. Y.
Federal Boiler Co., Inc., Midland Park, N. J.
Fluid Heat Div., Baltimore 24, Md.
General Automatic Products Corp., Baltimore 13, Md.
General Heating Products Co., Philadelphia 23, Pa.
General Machine Co., Inc., Emmaus, Pa.
General Oil Heating Corp., West New York, N. J.
General Products Co., Fredericksburg, Va.
Gerstein & Cooper Co., Boston, Mass.

Gibraltar Corp. of America, Brooklyn 11, N. Y.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
A. Greene Mfg. Co., Philadelphia, Pa.
Hanson-Gates Mfg. Co., Inc., Reading, Mass.
Hart Heat Div., Peoria, 2, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Heil Co., Milwaukee 1, Wis.
Hershey Machine & Foundry Co., Manheim, Pa.
Homease Products Co., Paterson, N. J.
International Heater Co., Utica, N. J.
Iron Fireman Mfg. Co., Cleveland, O.
S. T. Johnson Co., Oakland, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
LaSalle Oil Burner Co., Inc., Seattle 3, Wash.
Major Oil Burner Co., Philadelphia 22, Pa.
Marietta Metal Products Corp., Marietta, Pa.
May Oil Burner Div., Baltimore 30, Md.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
Morheat Corp., Lansing 12, Mich.
L. J. Mueller Furnace Co., Milwaukee 15, Wis.
National Home Eqpt. Co., New York 7, N. Y.
National Radiator Co., Johnstown, Pa.
Norge Heat Div., Detroit 26, Mich.
Norse Boiler Co., New Market, N. J.
Oil Eqpt. Laboratories, Inc., Elizabeth, N. J.
Pacific Oil Co., Fall River, Mass.
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
Petro Div., Cleveland 11, O.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Quiet Automatic Burner Corp., Newark 4, N. J.
Reif-Rexoil, Inc., Buffalo 3, N. Y.
Thomas D. Russo, Inc., Boston 31, Mass.
Schwab Safe Co., Lafayette, Ind.
Selectrol Eng. Co., Brooklyn 23, N. Y.
Shephard Heater Co., Terre Haute, Ind.
Simplex Oil Heating Corp., Philadelphia 11, Pa.
H. B. Smith Co., Inc., Westfield, Mass.
Standard Arcoil Corp., Newark, N. J.
Steel Products, Inc., West Haven, Conn.
Stewart Oil Burner Co., Hanover, Pa.
Stutzman Oil Burner Co., Aldan, Clifton Heights P. O., Pa.
Surface Combustion Corp., Toledo 1, O.
Thatcher Furnace Co., Garwood, N. J.
Titusville Iron Works Div., Titusville, Pa.
Toridheet Div., Cleveland 2, O.
U. S. Machine Corp., Lebanon, Ind.
V&E Products, Inc., Schuylkill Haven, Pa.
Viking Oil Co., Milwaukee, Wis.
Waltham Oil Burner Co., E. Boston, Mass.
Waterfilm Boilers, Jersey City, N. J.
Wayne Home Eqpt. Co., Inc., Fort Wayne 4, Ind.
Weatherall Eng., Inc., Providence 4, R. I.
Westcott-Alexander, Inc., Madison, N. J.
Will-Burt Co., Orrville, O.
Williams Oil-O-Matic Div., Bloomington, Ill.
Winston Co., Newark, N. J.
York-Shipley, Inc., York, Pa.

Hot water, atomizing vertical rotary

Clayton Mfg. Co., El Monte, Calif.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Iron Fireman Mfg. Co., Cleveland, O.

Hot water, low pressure burner

Acme Tank & Welding Div., West Hartford 10, Conn.
Airflame, Waukegan, Ill.
Brown Oil Burning Eqpt. Co., Cambridge, Mass.
Cleaver-Brooks Co., Milwaukee 9, Wis.
C. H. Dutton, Kalamazoo 6, Mich.
General Electric Co., Bloomfield, N. J.
Michigan Tank & Heater Corp., Dearborn, Mich.
Mt. Hawley Mfg. Co., Peoria 4, Ill.
Nu-Way Corp., Rock Island, Ill.
Pacific Oil Co., Fall River, Mass.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Stutzman Oil Burner Co., Aldan, Clifton Heights P. O., Pa.
U. S. Machine Corp., Lebanon, Ind.
Weatherall Eng., Inc., Providence 4, R. I.
Williams Oil-O-Matic Div., Bloomington, Ill.

Hot water, vaporizing

Fano-Flame Oil Burner Co., Huntington Park, Calif.
Homease Products Co., Paterson 3, N. J.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Michigan Burner Co, Detroit 28, Mich.

Hot water, wall flame vertical rotary

Fluid Heat Div., Baltimore 24, Md.
Timken Silent Automatic Div., Jackson, Mich.
Toridheet Div., Cleveland 2, O.
Viking Oil Co., Milwaukee, Wis.

Steam, atomizing vertical rotary

Gem Fuel Oil Burners, Frankfort, Ky.
Hayward Mfg. Co., Inc., Brooklyn 31, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.

Steam Generator

Ames Iron Works, Oswego, N. Y.
Clayton Mfg. Co., El Monte, Calif.
Cleaver-Brooks Co., Milwaukee 9, Wis.
Cyclotherm Corp., Oswego, N. Y.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Johnston Bros., Inc., Ferrysburg, Mich.
P. M. Lattner Mfg. Co., Cedar Rapids, Ia.
Orr and Sembower, Inc., Reading, Pa.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Simplex Oil Heating Corp., Philadelphia 11, Pa.
Staffco Eng. Corp., Chicago 38, Ill.
Stewart Oil Burner Co., Hanover, Pa.
Titusville Iron Works Div., Titusville, Pa.
York-Shipley, Inc., York, Pa.

Steam, high pressure burner

Acme Heating Div., West Hartford, Conn.
Airflame, Waukegan, Ill.
Airtemp Div., Dayton 1, O.
Alan Distributors, Inc., Worcester, Mass.
Aldrich Co., Wyoming, Ill.
American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa.
Anchor Div., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Auto-Heat Corp., Middletown, Conn.
Berkley Mfg. Co., Philadelphia, Pa.
Bethlehem Fdry. & Machine Co., Bethlehem, Pa.
Bryan Steam Corp., Peru, Ind.
Chalmers Oil Burner Co., Minneapolis, Minn.
Cleaver-Brooks Co., Milwaukee 9, Wis.
Columbia Boiler Co., Pottstown, Pa.
Cyclotherm Corp., Oswego, N. Y.
Delco Appliance Div., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
DeSoto Oil Burner Co., York, Pa.
Dewey-Shepard Boiler Co., Indianapolis, Ind.
Diesel Oil Burner Corp. of New York, Jamaica 5, N. Y.
C. H. Dutton, Kalamazoo 6, Mich.
Eastern Fdry Co., Boyertown, Pa.
Eckhart Mfg. Co., Inc., Union, N. J.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Eng. Industries Co., Ltd., Toronto, Ontario, Can.
Esso Standard Oil Co., New York 19, N. Y.
Fairchester Oil Co., Inc., Port Chester, N. Y.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Federal Boiler Co., Inc., Midland Park, N. J.
Fitzgibbons Boiler Co., New York 7, N. Y.
Fluid Heat Div., Baltimore 24, Md.
Gem Fuel Oil Burners, Frankfort, Ky.
General Automatic Products Corp., Baltimore 13, Md.
General Heating Products Co., Philadelphia 23, Pa.
General Machine Co., Inc., Emmaus, Pa.
General Oil Heating Corp., West New York, N. J.
General Products Co., Fredericksburg, Va.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
A. Greene Mfg. Co., Philadelphia, Pa.
Hart Heat Div., Peoria 2, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Hayward Mfg. Co., Inc., Brooklyn 31, N. Y.
Heil Co., Milwaukee 1, Wis.
Hershey Machine & Fdry. Co., Manheim, Pa.
Homease Products Co., Paterson 3, N. J.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
S. T. Johnson Co., Oakland, Calif.
Johnston Bros., Inc., Ferrysburg, Mich.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Major Oil Burner Co., Philadelphia 22, Pa.
Marietta Metal Products Corp., Marietta, Pa.
May Oil Burner Div., Baltimore 30, Md.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
Morheat Corp., Lansing 12, Mich.
L. J. Mueller Furnace Co., Milwaukee 15, Wis.
National Home Eqpt. Co., New York 7, N. Y.
National Radiator Co., Johnstown, Pa.
Norge Heat Div., Detroit 26, Mich.
Norse Boiler Co., New Market, N. J.
Oil Eqpt. Laboratories, Inc., Elizabeth, N. J.
Petro Div., Cleveland 11, O.
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Reif-Rexoil, Inc., Buffalo 3, N. Y.
Thomas D. Russo, Inc., Boston 31, Mass.
Schurs Oil Burner Co., Los Angeles 1, Calif.
Schwab Safe Co., Lafayette, Ind.
Selectrol Eng. Co., Brooklyn 23, N. Y.
Shepard Heater Co., Terre Haute, Ind.
Sinclair Refining Co., New York, N. Y.
H. B. Smith Co., Inc., Westfield, Mass.
Staffco Eng. Corp., Chicago 38, Ill.

Standard Arcoil Corp., Newark, N. J.
Steel Products, Inc., West Haven, Conn.
Stewart Oil Burner Co., Hanover, Pa.
Stutzman Oil Burner Co., Aldan, Clifton Heights P. O., Pa.
Thatcher Furnace Co., Garwood, N. J.
Titusville Iron Works Div., Titusville, Pa.
Toridheet Div., Cleveland 2, O.
Tru-Heet Co., Trenton, N. J.
U. S. Machine Corp., Lebanon, Ind.
U. S. Radiator Corp., Detroit 26, Mich.
V&E Products, Inc., Schuylkill Haven, Pa.
Viking Oil Co., Milwaukee, Wis.
Waterfilm Boilers, Jersey City, N. J.
Wayne Home Eqpt. Co., Inc., Fort Wayne 4, Ind.
Weatherall Eng., Inc., Providence 4, R. I.
Westcott-Alexander, Inc., Madison, N. J.
Williams Oil-O-Matic Div., Bloomington, Ill.
Winston Co., Newark, N. J.
York-Shipley, Inc., York, Pa.

Steam, low pressure burner
C. H. Dutton, Kalamazoo 6, Mich.
General Electric Co., Bloomfield, N. J.
Pacific Oil Co., Fall River, Mass.
Scott-Newcomb, Inc., St. Louis 19, Mo.

Steam, vaporizing
Kresno-Stamm Mfg. Co. (Canada) Ltd., Montreal, Can.
Michigan Burner Co., Detroit 28, Mich.

Steam, wall flame vertical rotary
Fluid Heat Div., Baltimore 24, Md.
Timken Silent Automatic Div., Jackson, Mich.
Toridheet Div., Cleveland 2, O.
Viking Oil Co., Milwaukee, Wis.

SPACE HEATERS, OILFIRED

Circulating, pot burner, forced circ.
American Stove Co., Lorain, O.
Coleman Co., Inc., Wichita, Kan.
Consolidated Industries, Inc., Lafayette, Ind.
Duo-Therm Div., Lansing, Mich.
Estate Stove Co., Hamilton, O.
Evans Products Co., Plymouth, Mich.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Florence Stove Co., Gardner, Mass.
Gray & Dudley Co., Nashville, Tenn.
International Oil Burner Co., St. Louis 10, Mo.
Karr Range Co., Belleville, Ill.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Ia.
Longergan Mfg. Co., Albion, Mich.
Magic Chef, Inc., St. Louis 10, Mo.
Monarch Range Co., Beaver Dam, Wis.
Prentiss Wabers Products Co., Wisconsin Rapids, Wis.
Quaker Mfg. Co., Chicago 10, Ill.
Queen Stove Works, Inc., Albert Lea, Minn.
Quincy Stove Mfg. Co., Quincy, Ill.
Safety Products Co., Brockton, Mass.
Siegler Enamel Range Co., Centralia, Ill.
Silent Sioux Corp., Orange City, Ia.
Spark Stove Co., Oakland, Calif.
Sure Heat Stove Co., Inc., Plano, Tex.
Therm Gas Generator Co., Inc., Seattle, Wash.
United Stove Co., Ypsilanti, Mich.

Circulating, pot burner, gravity circ.
Allen Mfg. Co., Inc., Nashville 1, Tenn.
American Gas Machine Co., Albert Lea, Minn.
American Stove Co., Lorain, O.
Beyer Oil Burner Co., Rosamond, Calif.
Coleman Co., Inc., Wichita, Kan.
Domestic Mfg. Co., Seattle, Wash.
Duo-Therm Div., Lansing, Mich.
Estate Stove Co., Hamilton, O.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Florence Stove Co., Gardner, Mass.
Gray & Dudley Co., Nashville, Tenn.
Heating Eqpt Mfg. Co., San Francisco, Calif.
Karr Range Co., Belleville, Ill.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Ia.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Lonergan Mfg. Co., Albion, Mich.
Magic Chef, Inc., St. Louis 10, Mo.
Nesco, Inc., Chicago, Ill.
Northwest Metal Products, Inc., Seattle 4, Wash.
Perfection Stove Co., Cleveland 4, O.
Prentiss Wabers Products Co., Wisconsin Rapids, Wis.
Quaker Mfg. Co., Chicago 10, Ill.
Queen Stove Works, Inc., Albert Lea, Minn.
Quincy Stove Mfg. Co., Quincy, Ill.
Safety Products Co., Brockton, Mass.
Siegler Enamel Range Co., Centralia, Ill.
Silent Sioux Corp., Orange City, Ia.
Super Oil Heater Co., Hartford, Conn.
Therm Gas Generator Co., Inc., Seattle, Wash.
United Stove Co., Ypsilanti, Mich.
Viking Mfg. Corp., Cleveland 14, O.
Wilson Stove & Mfg. Co., Inc., Metropolis, Ill.

Circulating, shell burner, forced circ.
Overhead Heaters, Inc., Detroit, Mich.
Safety Products Co., Brockton, Mass.

Circulating, shell burner, gravity circ.
Barridon Oil Burner Corp., Hartford, Conn.
Coleman Co., Inc., Wichita, Kan.
Duo-Therm Div., Lansing, Mich.
Jungers Stove & Range Co., Grafton, Wis.
Nesco, Inc., Chicago, Ill.
Safety Products Co., Brockton, Mass.
Victor Oil Burner Mfg. Co., Hartford, Conn.

Floor furnaces
Anchor Div., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Benner-Nawman, Inc., Oakland 8, Calif.
Beyer Oil Burner Co., Rosamond, Calif.
Chicago Steel Furnace Co., Chicago, Ill.
Coleman Co., Inc., Wichita, Kan.
Delta Heating Corp., Trenton, N. J.
Domestic Mfg. Co., Seattle, Wash.
Duo-Therm Div., Lansing, Mich.
J. L. Gillen Co., Detroit 28, Mich.
C. T. Harvey, Portsmouth, Va.
Iron Fireman Mfg. Co., Cleveland, O.
Johnson Heater Corp., Chelsea, Mass.
Kleer Kleen Mfg. Co., Oakland, Calif.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Long Mfg. Co., Tarboro, N. C.
J. F. Mulkey Co., Detroit 19, Mich.
Norge Heat Div., Detroit 26, Mich.
Northwest Metal Products, Inc., Seattle 4, Wash.
Oran Co., Columbus 7, O.
Perfection Stove Co., Cleveland, O.
Prentiss Waberg Products Co., Wisconsin Rapids, Wis.
Quaker Mfg. Co., Chicago 10, Ill.
Queen Stove Works, Inc., Albert Lea, Minn.
Reif-Rexoil, Inc., Buffalo 3, N. Y.

Reliance Products Corp., Portland 4, Ore.
Stewart Oil Burner Co., Hanover, Pa.
Therm Gas Generator Co., Inc., Seattle, Wash.
Thermo-Products, Inc., North Judson, Ind.
U. S. Machine Corp., Lebanon, Ind.
Viking Mfg. Corp., Cleveland 14, O.
Wayne Home Eqpt. Co., Inc., Fort Wayne 4, Ind.

Radiant, pot burner
Allen Mfg. Co., Inc., Nashville 1, Tenn.
American Gas Machine Co., Albert Lea, Minn.
American Stove Co., Lorain, O.
Beyer Oil Burner Co., Rosamond, Calif.
Breese Burners, Inc., Santa Fe, New Mexico
Florence Stove Co., Gardner, Mass.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Ia.
Lonergan Mfg. Co., Albion, Mich.
Magic Chef, Inc., St. Louis 10, Mo.
Perfection Stove Co., Cleveland 4, O.
Prentiss Wabers Products Co., Wisconsin Rapids, Wis.
Queen Stove Works, Inc., Albert Lea, Minn.
Quincy Stove Mfg. Co., Quincy, Ill.
Safety Products Co., Brockton, Mass.
Silent Sioux Corp., Orange City, Ia.
Sure Heat Stove Co., Inc., Plano, Tex.
Therm Gas Generator Co., Inc., Seattle, Wash.
United Stove Co., Ypsilanti, Mich.

Radiant, shell burner
Macleod Co., Cincinnati 22, O.
Safety Products Co., Brockton, Mass.
Super Oil Heater Co., Hartford, Conn.
Victor Oil Burner Mfg. Co., Hartford, Conn.

Wall furnaces
Auburn Burner Co., Auburn, Ind.
Benner-Nawman, Inc., Oakland 8, Calif.
Beyer Oil Burner Co., Rosamond, Calif.
Delta Heating Corp., Trenton, N. J.
Domestic Mfg. Co., Seattle, Wash.
Iron Fireman Mfg. Co., Cleveland, O.
Johnson Heater Corp., Chelsea, Mass.
Kleer Kleen Mfg. Co., Oakland, Calif.
Kresky Mfg. Co., Inc., Petaluma, Calif.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Lonergan Mfg. Co., Albion, Mich.
Northwest Metal Products, Inc., Seattle 4, Wash.
Quincy Stove Mfg. Co., Quincy, Ill.
Reliance Products Corp., Portland 4, Ore.
Silent Sioux Corp., Orange City, Ia.
Therm Gas Generator Co., Seattle, Wash.
U. S. Machine Corp., Lebanon, Ind.

FURNACE-BURNER UNITS

Ceiling-suspended
Air Conditioning Eng. Co., Cambridge, Mass.
Airtherm Mfg. Co., St. Louis 10, Mo.
Anchor Div., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Auburn Burner Co., Auburn, Ind.
Besser Metal Products Corp., Charlotte, N. C.
E. K. Campbell Heating Co., Kansas City 8, Mo.
Chicago Steel Furnace Co., Chicago, Ill.
Delta Heating Corp., Trenton, N. J.
Domestic Mfg. Co., Seattle, Wash.
Dravo Corp., Pittsburgh 22, Pa.
Esso Standard Oil Co., New York 19, N. Y.
Gilbert & Barker Mfg. Corp., West Springfield, Mass.

Harvey-Whipple, Inc., Springfield, Mass.
Iron Fireman Mfg. Co., Cleveland, O.
Johnson Heater Corp., Chelsea, Mass.
Kleer Kleen Mfg. Co., Oakland, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
Montag Stove & Furnace Works, Portland, Ore.
L. J. Mueller Furnace Co., Milwaukee 15, Wis.
Norge Heat Div., Detroit 26, Mich.
Northwest Fdry & Furnace Co., Portland 2, Ore.
Oil Eqpt. Laboratories, Inc., Elizabeth, N. J.
Overhead Heaters, Inc., 1612 Book Bldg., Detroit 26, Mich.
Pacific Oil Co., Fall River, Mass.
Perfection Stove Co., Cleveland 4, O.
Prentiss Wabers Products Co., Wisconsin Rapids, Wis.
Quiet Automatic Burner Corp., Newark, N. J.
Red Triangle Heater Co., Wausau, Wis.
Reif-Rexoil, Inc., Buffalo 3, N. Y.
Sandberg Mfg. Co., Portland, Ore.
Thermobloc Div., So. Norwalk, Conn.
Tjernlund Mfg. Co., St. Paul 8, Minn.
Viking Mfg. Corp., Cleveland 14, O.
Viking Oil Co., Milwaukee, Wis.
Waterman-Waterbury Co., Minneapolis 13, Minn.
Wayne Home Eqpt. Co., Inc., Fort Wayne 4, Ind.
Weatherall Eng., Inc., Providence 4, R. I.
Williams Oil-O-Matic Div., Bloomington, Ill.
York-Shipley, Inc., York, Pa.

Floor furnaces
(See listing under "Space Heaters, Oil-fired, Floor furnaces.")

Forced air, atomizing vertical rotary
Iron Fireman Mfg. Co., Cleveland, O.

Forced air, high pressure burner
Air Conditioning Eng. Co., Cambridge, Mass.
Airflame, Waukegan, Ill.
Airtemp Div., Dayton 1, O.
Airtherm Mfg. Co., St. Louis 10, Mo.
Alan Distributors, Inc., Worcester, Mass.
American Fdry & Furnace Co., Bloomington, Ill.
American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa.
Anchor Div., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Auburn Burner Co., Auburn, Ind.
Auburn Fdry, Inc., Auburn, Ind.
Auto Heat Corp., Middletown, Conn.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, O.
George R. Bascom Co., Inc., Dorchester 22, Mass.
Beaver Mfg. Co., Portland 4, Ore.
Beck Eng. Combustion Co., St. Louis 6, Mo.
Berkley Mfg. Co., Philadelphia, Pa.
Besser Metal Products Corp., Charlotte, N. C.
Bethlehem Fdry & Machine Co., Bethlehem, Pa.
Bryant Air Conditioning Corp., Philadelphia 23, Pa.
Bryant Heater Div., Cleveland 10, O.
Campbell Heating Co., Des Moines 17, Ia.
Cary Mfg. Co., Waupaca, Wis.
Century Eng. Corp., Cedar Rapids, Ia.
Certified Furnace Co., St. Paul 4, Minn.
Chalmers Oil Burner Co., Minneapolis, Minn.
Chandler Co., Cedar Rapids, Ia.
Chicago Steel Furnace Co., Chicago, Ill.
Chimney Furnace Corp., Rockville, Md.
Coleman Co., Inc., Wichita, Kan.
Combustioneer Div., Springfield, O.
Conco Eng. Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago 5, Ill.
Crown Petroleum Corp., Hartford, Conn.
Delco Appliance Div., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
DeSoto Oil Burner Co., York, Pa.
Domestic Mfg. Co., Seattle, Wash.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Dravo Corp., Pittsburgh 22, Pa.
Electro-Watt, Inc., Seattle 9, Wash.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Eng. Industries Co., Ltd., Toronto, Can.
Esso Standard Oil Co., New York 19, N. Y.
Ex Cel Co., Dowagiac, Mich.
Excelsior Steel Furnace Co., Chicago, Ill.
Fageol Heat Machine Co., Detroit 11, Mich.
Fairchester Oil Co., Inc., Port Chester, N. Y.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Farquhar Furnace Co., Wilmington, O.
Firewel Co., Buffalo 21, N. Y.
Fluid Heat Div., Baltimore 24, Md.
Front Rank Mfg. Co., St. Louis 4, Mo.
General Automatic Products Corp., Baltimore 13, Md.
General Machine Co., Emmaus, Pa.
General Oil Heating Corp., West New York, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
J. L. Gillen Co., Detroit 28, Mich.
Green Colonial Furnace Co., Des Moines, Ia.
A. Greene Mfg. Co., Philadelphia, Pa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Peoria 2, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Henry Furnace Co., Medina, O.
Heil Co., Milwaukee 1, Wis.
Herco Oil Burner Corp., Lancaster, Pa.
Hershey Machine & Fdry Co., Manheim, Pa.
Holland Furnace Co., Holland, Mich.
HomEase Products Co., Paterson 3, N. J.
Illinois Iron & Bolt Co., Chicago, Ill.
Ingersoll Products Div., Kalamazoo, Mich.
International Heater Co., Utica. N. Y.
International Oil Burner Co., St. Louis 10, Mo.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
S. T. Johnson Co., Oakland, Calif.
Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
Kaustine Co., Inc., Perry, N. Y.
Keith Furnace Co., Des Moines, Ia.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Laco Oil Burner Co., Inc., Griswold, Ia.
LaSalle Oil Burner Co., Inc., Seattle 3, Wash.
Lee Eng. Co., Wilmington, Del.
Leeson Air Conditioning Corp., Detroit 27, Mich.
Lennox Furnace Co., Marshalltown, Ia.
Loxaire Corp., Tacoma, Wash.
Luty Furnace Mfg. Co., Detroit 21, Mich.
McPherson Furnace & Supply Co., Portland 12, Ore.
Majestic Co., Inc., Huntington, Ind.
Major Oil Burner Co., Philadelphia 22, Pa.
May Oil Burner Div., Baltimore 30, Md.
Mayflower Air-Conditioners, Inc., St. Paul 6, Minn.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
Metromatic Oil Burner Co., Everett, Mass.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Steel Products, Inc., Buffalo 7, N. Y.
L. J. Mueller Furnace Co., Milwaukee 15, Wis.
Niagara Furnace Div., Cleveland, O.
Norge Heat Div., Detroit 26, Mich.
Northwest Fdry & Furnace Co., Portland 2, Ore.
Oil-Elec-Tric Co., St. Paul 4, Minn.
Oil Eqpt. Laboratories, Inc., Elizabeth, N. J.
C. A. Olsen Mfg. Co., Elyria, O.
Arthur A. Olson & Co., Canfield, O.
Pacific Oil Co., Fall River, Mass.
J. V. Patten Co., Sycamore, Ill.
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
Perfection Stove Co., Cleveland 4, O.
Petro Div., Ceveland 11, O.
Premier Furnace Co., Dowagiac, Mich.
Quiet Automatic Burner Corp., Newark 4, N. J.
Radiant-Aire Corp., Michigan City, Ind.
Radiation Furnace Corp., Benton Harbor, Mich.
Ray Oil Burner Co., San Francisco 12, Calif.
Reif-Rexoil, Inc., Buffalo 3, N. Y.
Republic Products Co., Philadelphia 36, Pa.
Thomas D. Russo, Inc., Boston 31, Mass.
Rybolt Heater Co., Ashland, O.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schurs Oil Burner Co., Los Angeles 1, Calif.
Schwab Safe Co., Lafayette, Ind.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Sinclair Refining Co., New York, N. Y.
Standard Arcoil Corp., Newark, N. J.
Standard Heating Eqpt. Co., Waterloo, Ia.
Steel Products, Inc., West Haven, Conn.
Stewart Oil Burner Co., Hanover, Pa.
Stutzman Oil Burner Co., Aldan, Clifton Heights P. O., Pa.
Surface Combustion Corp., Toledo 1, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Therm Gas Generator Co., Inc., Seattle, Wash.
Thermobloc Div., So. Norwalk, Conn.
Thermo-Products, Inc., North Judson, Ind.
Tjernlund Mfg. Co., St. Paul 8, Minn.
Toridheet Div., Cleveland 2, O.
Tru-Heet Co., Trenton, N. J.
U. S. Machine Corp., Lebanon, Ind.
U. S. Radiator Corp., Detroit 26, Mich.
Utica Structural Steel, Inc., Utica 1, N. Y.
Viking Oil Co., Milwaukee, Wis.
Waltham Oil Burner Co., E. Boston, Mass.
Waterman-Waterbury Co., Minneapolis 13, Minn.
Wayne Home Eqpt Co., Inc., Fort Wayne 4, Ind.

Weatherall Eng., Inc., Providence 4, R. I.
West Coast Quiet Heet, Inc., Portland, Ore.
Williamson Heater Co., Cincinnati 9, O.
Williams Oil-O-Matic Div., Bloomington, Ill.
XXth Century Heating & Ventilating Co., Akron 1, O.
York-Shipley, Inc., York, Pa.

Forced air, low pressure burner

Acme Tank & Welding Div., West Hartford 10, Conn.
Airflame, Waukegan, Ill.
Combustioneer Div., Springfield, O.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Domestic Mfg. Co., Seattle, Wash.
Dravo Corp., Pittsburgh 22, Pa.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
General Electric Co., Bloomfield, N. J.
Pacific Oil Co., Fall River, Mass.
Richmond Radiator Co., N. Y. 17, N. Y.
Schurs Oil Burner Co., Los Angeles 1, Calif.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Stutzman Oil Burner Co., Aldan, Clifton Heights P. O., Pa.
U. S. Machine Corp., Lebanon, Ind.
Viking Mfg. Corp., Cleveland 14, O.
Weatherall Eng., Inc., Providence 4, R. I.
Williams Oil-O-Matic Div., Bloomington, Ill.

Forced air, vaporizing

Airtemp Div., Dayton 1, O.
Anchor Div., New Albany, Ind.
Benner-Nawman, Inc., Oakland 8, Calif.
Beyer Oil Burner Co., Rosamond, Calif.
Cary Mfg. Co., Waupaca, Wis.
Century Eng. Corp., Cedar Rapids, Ia.
Coleman Co., Inc., Wichita, Kan.
Conco Eng. Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago 5, Ill.
Delco Appliance Div., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
Domestic Mfg. Co., Seattle, Wash.
Duo-Therm Div., Lansing, Mich.
Firewel Co., Buffalo 21, N. Y.
Hall-Neal Furnace Co., Indianapolis, Ind.
Heat, Inc., Detroit 26, Mich.
Henry Furnace Co., Medina, O.
Holland Furnace Co., Holland, Mich.
Ingersoll Products Div., Kalamazoo, Mich.
International Oil Burner Co., St. Louis 10, Mo.
Jungers Stove & Range Co., Grafton, Wis.
Kleer Kleen Mfg. Co., Oakland, Calif.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Laco Oil Burner Co., Inc., Griswold, Ia.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Meyer Furnace Co., Peoria, Ill.
Northwest Metal Products, Inc., Seattle 4, Wash.
O'Halloran Industries, Detroit 4, Mich.
C. A. Olsen Mfg. Co., Elyria, O.
Oran Co., Columbus 7, O.
J. V. Patten Co., Sycamore, Ill.
Perfection Stove Co., Cleveland 4, O.
Premier Furnace Co., Dowagiac, Mich.
Prentiss Wabers Products Co., Wisconsin Rapids, Wis.
Silent Sioux Corp., Orange City, Ia.
Thatcher Furnace Co., Garwood, N. J.
Thermo-Products, Inc., North Judson, Ind.
U. S. Machine Corp., Lebanon, Ind.
Waterman-Waterbury Co., Minneapolis 13, Minn.

Forced air, wall flame vertical rotary

Fluid Heat Div., Baltimore 24, Md.
Pacific Oil Co., Fall River, Mass.
Timken Silent Automatic Div., Jackson, Mich.
Toridheet Div., Cleveland 2, O.
Viking Oil Co., Milwaukee, Wis.

Gravity, atomizing vertical rotary

Iron Fireman Mfg. Co., Cleveland, O.

Gravity, high pressure burner

Airflame, Waukegan, Ill.
American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa.
Anchor Div., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Auburn Burner Co., Auburn, Ind.
Bryant Air Conditioning Corp., Philadelphia 23, Pa.
Bryant Heater Div., Cleveland 10, O.
Century Eng. Corp., Cedar Rapids, Ia.
Certified Furnace Co., St. Paul 4, Minn.
Chandler Co., Cedar Rapids, Ia.
Chicago Steel Furnace Co., Chicago, Ill.
Conco Eng. Works, Mendota, Ill.
Crane Co., Chicago 5, Ill.
DeSoto Oil Burner Co., York, Pa.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Farquhar Furnace Co., Wilmington, O.
Firewel Co., Buffalo 21, N. Y.
Green Colonial Furnace Co., Des Moines, Ia.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Peoria 2, Ill.
Heil Co., Milwaukee 1, Wis.
Illinois Iron & Bolt Co., Chicago, Ill.
Ingersoll Products Div., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
Kaustine Co., Inc., Perry, N. Y.
Keith Furnace Co., Des Moines, Ia.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Major Oil Burner Co., Philadelphia 22, Pa.
Metro Oil Burner Mfg. Co., Inc., Easthampton, Mass.
Morrison Steel Products, Inc., Buffalo 7, N. Y.
L. J. Mueller Furnace Co., Milwaukee 15, Wis.
Niagara Furnace Div., Cleveland, O.
Norge Heat Div., Detroit 26, Mich.
C. A. Olsen Mfg. Co., Elyria, O.
J. V. Patten Co., Sycamore, Ill.
Premier Furnace Co., Dowagiac, Mich.
Radiant-Aire Corp., Michigan City, Ind.
Republic Products Co., Philadelphia 36, Pa.
Thomas D. Russo, Inc., Boston 31, Mass.
Rybolt Heater Co., Ashland, O.
Sandberg Mfg. Co., Portland, Ore.
U. S. Machine Corp., Lebanon, Ind.
U. S. Radiator Corp., Detroit 26, Mich.
Waterman-Waterbury Co., Minneapolis 13, Minn.
Wayne Home Eqpt. Co., Inc., Fort Wayne 4, Ind.

Gravity, low pressure burner

Airflame, Waukegan, Ill.
Denver Fire Clay Co., Denver 17, Colo.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Schwab Safe Co., Lafayette, Ind.
U. S. Machine Corp., Lebanon, Ind.
Viking Mfg. Corp., Cleveland 14, O.

Gravity, vaporizing burner

American Gas Machine Co., Albert Lea, Minn.

Anchor Div., New Albany, Ind.
Beyer Oil Burner Co., Rosamond, Calif.
Cary Mfg. Co., Waupaca, Wis.
Century Eng. Corp., Cedar Rapids, Ia.
Certified Furnace Co., St. Paul 4, Minn.
Crane Co., Chicago 5, Ill.
Delco Appliance Div., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
Firewel Co., Buffalo 21, N. Y.
Hall-Neal Furnace Co., Indianapolis, Ind.
Henry Furnace Co., Medina, O.
Ingersoll Products Div., Kalamazoo, Mich.
International Oil Burner Co., St. Louis 10, Mo.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Laco Oil Burner Co., Inc., Griswold, Ia.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Meyer Furnace Co., Peoria, Ill.
Northwest Mfg. Co., Mitchell, S. D.
Northwest Metal Products, Inc., Seattle 4, Wash.
O'Halloran Industries, Detroit 4, Mich.
C. A. Olsen Mfg. Co., Elyria, O.
J. V. Patten Co., Sycamore, Ill.
Perfection Stove Co., Cleveland 4, O.
Premier Furnace Co., Dowagiac, Mich.
Prentiss Wabers Products Co., Wisconsin Rapids, Wis.
Sam-Bee Oil Burner Co., South Bend 14, Ind.
U. S. Machine Corp., Lebanon, Ind.
Waterman-Waterbury Co., Minneapolis 13, Minn.

Pipeless, oilfired

C. T. Harvey, Portsmouth, Va.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Montag Stove & Furnace Works, Portland, Ore.
Pacific Oil Co., Fall River, Mass.
Thatcher Furnace Co., Garwood, N. J.
Waterman-Waterbury Co., Minneapolis 13, Minn.

Wall furnaces

(See listing under "Space Heaters, Oilfired, Wall furnaces.")

WATER HEATERS

Direct oilfired, side arm

Crane Co., Chicago 5, Ill.
Hanson-Gates Mfg. Co., Inc., Reading, Mass.
Hotstream Heater Co., Cleveland, O.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Major Oil Burner Co., Philadelphia 22, Pa.
Perfection Stove Co., Cleveland 4, O.
Safety Products Co., Brockton, Mass.

Storage direct, oilfired, pressure burner

Aldrich Co., Wyoming, Ill.
Auburn Burner Co., Auburn, Ind.
Bock Corp., Madison, Wis.
Brown Oil Burning Eqpt. Co., Cambridge, Mass.
Century Eng. Corp., Cedar Rapids, Ia.
Chalmers Oil Burner Co., Minneapolis, Minn.
Clayton Mfg. Co., El Monte, Calif.
Crane Co., Chicago 5, Ill.
Dewey-Shepard Boiler Co., Indianapolis, Ind.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Hart Heat Div., Peoria 2, Ill.
S. T. Johnson Co., Oakland, Calif.

(Please turn to page 146)

Adjusting vaporizing Burners

fueloil & oil heat Short Short Article on Burner Service

AN OIL COMPANY owner wondered why only one of his four service men proved able to get good results from vaporizing pot type burners firing small forced-air furnaces. The 300 jobs of this type owned by this company's fueloil customers had spells of acting up. Once a job got into trouble, complaint followed complaint until finally this certain service man was sent out. He would end the trouble.

"What do you do to pot burners that the other men don't do?" asked the boss.

"I start out acting as though I love that kind of equipment. The other men don't," the man said flatly. "I know that modern furnaces fired by pot type burners can work well. They are giving good heat in thousands and thousands of homes. Finding a sick burner of this type when I go out on a service call, I settle down to some hard work and put it in A-1 condition. I make it burn like new, even if it takes two hours.

The service man then gave the following details. When forced-air furnaces fired by vaporizing burners first were used in this city, on many service calls it was necessary to eliminate installation defects related to poor draft and failure to level the pots precisely. Next came a wave of service calls that involved installing oil line filters, cleaning the strainers in constant level valves, adjusting pilot-fire and high-fire oil rates precisely according to the manufacturers' instructions, and using the cleaner rods that run into the pots of certain units.

Finally things settled down because practically all installation defects had been eliminated, all jobs had been fitted with oil line filters, and the owners understood the units better and were attending more-or-less to the maintenance chores that owners should attend to regularly.

"From that point on," said the service man who loves this type equipment, "we get out of the kindergarten kind of service call and get only service calls that call for good work. Yesterday, for example, I went on a call and did the usual for the burner, winding up with perfect operation."

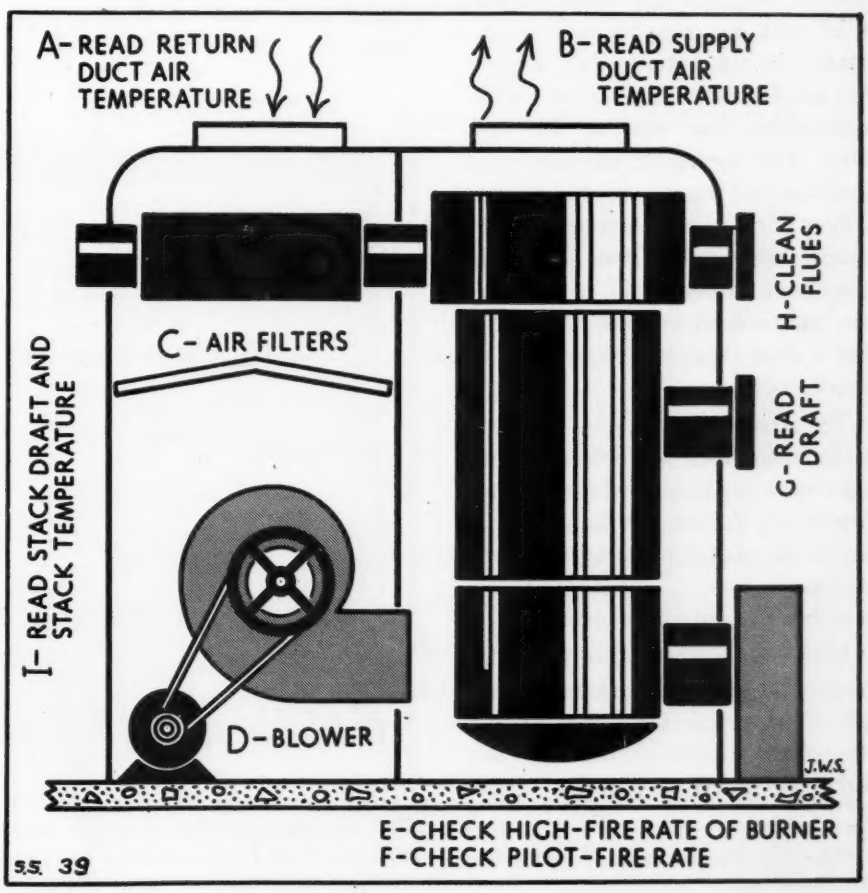
Arriving on this job which he'd set up properly two years before and hadn't seen since, he found the chimney plugged with soot. Fortunately the owner was home and helped him clean the chimney flue. Otherwise, and "by hook or by crook" he says, he would have cleaned it himself. Encountering bad trouble of the type that goes on and on for less thorough service men, he says, he always makes certain the chimney and smokepipe are as clean as new.

Then he cleans every speck of soot and carbon from the heating surfaces and pot of the unit, removing the pot if this is easily possible. Borderline cases of carbonizing trouble and pots that can't be removed are taken care of by scraping and brushing through the inspection doors and later on burning out as much soot and carbon as possible. Use soot-burning chemicals with caution, however, he warns. Don't start chimney fires, shoot soot "snow flakes" up a chimney and onto a neighbor's wash or snow covered lawn, or develop terrific temperatures in lightly-built furnaces or pots.

Finding this easy and helpful, on starting a furnace after thus making it nearly like new as far as freedom from soot is concerned, this man uses two duct thermometers (points "A" and "B" in drawing). He checks the air filter, "C." Later on, getting a cue from the two duct thermometers and a stack thermometer, he changes the blower speed, "D," if necessary for best heating.

Point "E" in the drawing relates to precise setting of the high-fire rate, following the furnace manufacturer's orders concerning this, and point "F" relates to setting the pilot oil rate.

Setting the smokepipe draft regulator gives the proper smokepipe draft "I" and proper over-fire draft "G." The two draft readings are a double check on freedom from soot in the chimney flue, smokepipe, and furnace flues.



Sell convertibility....but

use the Benefits of a good oilheating Installation to deter the Switch to Gas

by
David Wepman*

ONE OF THE MANY PROBLEMS which the coming of natural gas, as a competitive fuel, has created in many markets is the general unreliability of the supply of the gas itself. Many major American cities have found themselves a target for mass and concentrated selling of gasfired home heating units for one or two or more years, and then suddenly discovered that the supply of this fuel has been cut off without warning. That experience happened to Detroit, to Chicago, to Pittsburgh and to other thriving gas markets.

When that happens, unfortunately, the Gas Companies furnishing the fuel do not openly and honestly say "We do not have any gas to sell and will not have any for an indefinite period." On the contrary, they continue to encourage homeowners in the belief that gas supplies will be increased in the future; they suggest that gas for new installations will be forthcoming next year or the year after. The net result has been that homeowners become confused, unwilling to make an investment in automatic heat in any form, since they have been strongly sold on the virtues and economies of gas, and believe that a short delay will allow them to install gas.

The active and aggressive oilburner dealer then faces not only the ordinary sales resistance, which is common to any market, but the additional one of the prospect that says "I need automatic heat, I want automatic heat, but I would like to wait for gas."

Every worth while oilburner dealer knows that given a fair chance he can sell oil heat against gas heat or any other type of automatic heat. But too often the initial propaganda of the natural gas advocates has created such a strong desire in the customer's mind that he is unwilling to give the oilheating dealer a chance to prove his point, even though such resistance means that he the customer must continue to burn hand-fired coal. The dealer thus is placed in the position of desperately needing a single sales weapon to help him overcome that "waiting for gas" prospect resistance.

This article deals with one method of overcoming that particular resistance.

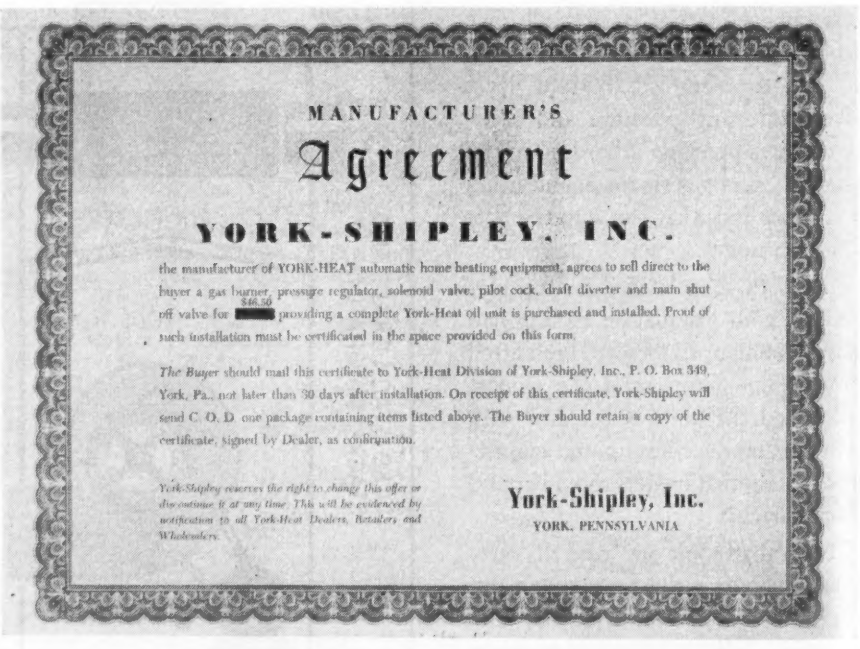
Some manufacturers are already offering complete lines of boilers and furnaces convertible from one fuel to another. The use of these convertible units furnishes the dealer with an extremely powerful sales argument. With these units he is able to say to his prospect, "Gas is not now available. Let us install this completely automatic heating plant fired by oil. When gas is available, if you still desire to change fuels, we can quote you a fixed price now for such a conversion."

The homeowner then gets his automatic heating at once and he is assured in writing that if he desires a conversion when gas is available, the total cost of such a conversion will be far from prohibitive.

At least one manufacturer is making this conversion offer for his dealers at a very low price indeed. He offers to sell directly to the homeowner a complete conversion package, containing all of the equipment necessary to change from oil to gas, for a total price of $46.50. This same manufacturer furnishes the dealer with an engraved certificate attesting to this offer.

By the use of this certificate every fear of an expensive conversion job is removed from the customer's mind and the thought that he may be wasting his total investment in a new automatic heating plant is also forgotten.

If the manufacturer does not make such a sales weapon available the dealer himself can write a specific guarantee actually quoting a price for conversion from oil to gas, and



MANUFACTURER'S

Agreement

YORK-SHIPLEY, INC.

the manufacturer of YORK-HEAT automatic home heating equipment, agrees to sell direct to the buyer a gas burner, pressure regulator, solenoid valve, pilot cock, draft diverter and main shut off valve for $46.50 providing a complete York-Heat oil unit is purchased and installed. Proof of such installation must be certificated in the space provided on this form.

The Buyer should mail this certificate to York-Heat Division of York-Shipley, Inc., P. O. Box 349, York, Pa., not later than 30 days after installation. On receipt of this certificate, York-Shipley will send C. O. D. one package containing items listed above. The Buyer should retain a copy of the certificate, signed by Dealer, as confirmation.

York-Shipley reserves the right to change this offer or discontinue it at any time. This will be evidenced by notification to all York-Heat Dealers, Retailers and Wholesalers.

York-Shipley, Inc.
YORK, PENNSYLVANIA

Certificate *used by York-Heat dealers when they sell an oilburner to a customer who says he wants gas heat but who can't arrange for gas supply. The article explains York-Heat's reasons for this policy and tells how to use it to sell an oilburner and make it stick whether gas for heating becomes available or not.*

*Merchandising Manager, York-Shipley, Inc., York, Pa.

thus give himself an almost equally powerful sales wapon.

All of you know that once the customer gets a properly installed oilfired heating unit in his home and learns from actual experience the benefits and values to be received from such an installation, he will have no desire to change to gas at any time. The dealer has thus used a sound sales psychology. Instead of appearing in the light of one who knocks or tries to talk down the value of competitive fuel, he can appear to accept it, to agree to give his customer all the benefits of that competitive fuel when as and if it becomes available.

By so doing he can convince the customer that he should allow an immediate installation of an oilfired unit and trust to the inherent virtues of the unit to make the sales stick.

Editor's Note: One large manufacturer has shipped several thousand of these convertible units during the past two years. The interesting point is that subsequently he has supplied less than ten of the kits for converting to gas.

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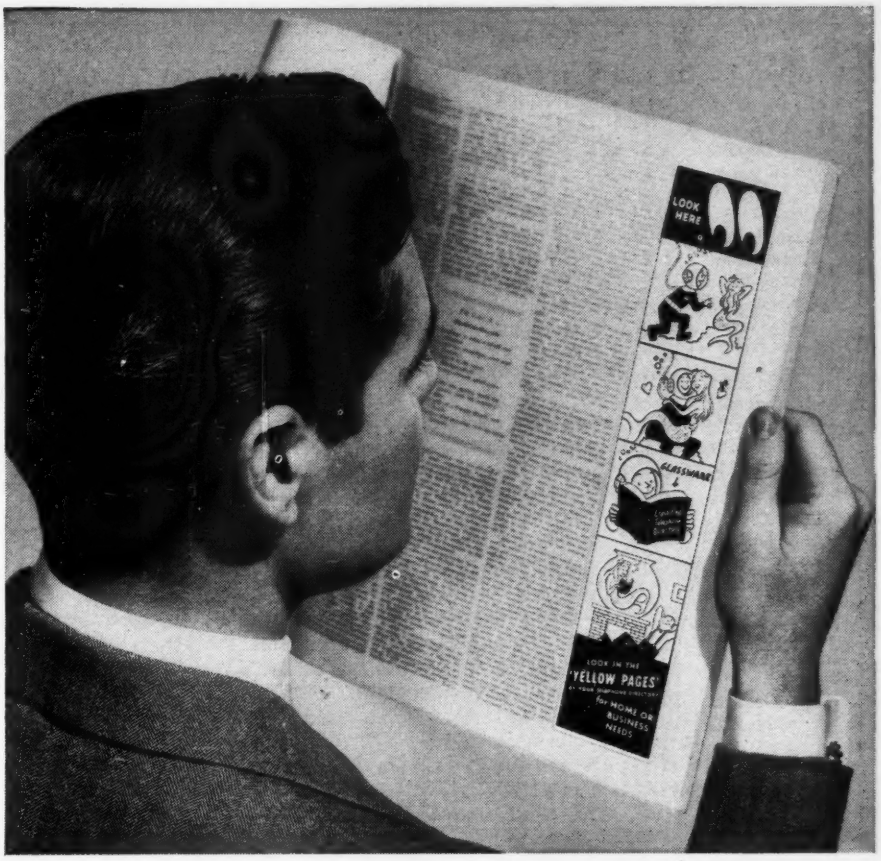
Pickering, Pocahontas merge in New England

ON MAY 27 stockholders of the Pocahontas Fuel Co., Inc., coal and oil producers and shippers, approved plans to merge with the George W. Pickering Co. and Pickering-Sprague, Breed, century-old New England fuel concerns with headquarters in Salem and Lynn, Mass. Horace E. Davenport, president of the Pickering companies, has been named vice-president in charge of all New England operations for Pocahontas and will retain his position with the Pickering companies, which are to continue operations under their own names.

Davenport has been associated with the fuel industry for 23 years, serving as Pickering president since 1933. He is president of the Independent Oil Men's Association of New England and a member of the National Petroleum Council.

Armstrong R. Matthews, Pocahontas president, explained that the merger, in which Pickering stock will be exchanged for shares in Pocahontas, will afford New England fuel users a



Why the 'yellow pages' will help your sales results in 1952

THIS YEAR thirteen leading consumer magazines will be used to promote the 'yellow pages' of the telephone directory. They will carry 373,802,585 of these eye-catching 'yellow pages' cartoon messages.

This national advertising campaign will remind more housewives, home owners and business men in your community to use the 'yellow pages.' That is why the 'yellow pages' will be more important than ever to you in 1952.

Be sure you are represented at every appropriate classified heading. Call your telephone business office today...your directory representative is ready to help you.

AMERICA'S BUYING GUIDE FOR OVER 60 YEARS

Distribution of vaporizing space Heaters

	Calendar year 1951*	1/1/46 through 12/31/51**
Maine	1,887	31,829
New Hampshire	771	14,945
Vermont	976	16,948
Massachusetts	1,844	51,348
Rhode Island	1,064	17,784
Connecticut	1,144	30,045
NEW ENGLAND	7,686 (2.3%)	162,899 (3.9%)
New York	11,499	178,651
New Jersey	1,147	55,128
Pennsylvania	9,707	119,331
Delaware	1,156	17,176
Maryland	6,531	85,349
D. C.	2,188	24,995
MID-ATLANTIC	32,228 (9.6%)	480,630 (11.4%)
Virginia	18,901	151,277
West Virginia	549	16,235
North Carolina	37,293	252,492
South Carolina	16,500	97,124
Georgia	10,268	87,978
Florida	19,732	115,884
SOUTH ATLANTIC	103,243 (30.6%)	720,990 (17.2%)
Michigan	22,909	283,130
Ohio	16,427	186,840
Indiana	22,857	206,760
Illinois	24,026	353,468
Wisconsin	10,184	151,557
Minnesota	12,689	202,182
Iowa	15,874	183,550
Missouri	17,809	203,063
Kansas	1,106	51,302
Nebraska	4,548	74,939
South Dakota	4,849	50,271
North Dakota	3,998	42,387
MIDWEST	157,276 (46.7%)	1,989,449 (47.4%)
Kentucky	4,636	57,195
Tennessee	6,097	117,934
Alabama	1,861	49,051
Mississippi	96	20,131
Arkansas	941	31,599
Louisiana	1,772	14,101
Oklahoma	33	21,565
Texas	134	56,641
SOUTH CENTRAL	15,570 (4.6%)	368,217 (8.8%)
Montana	872	28,147
Idaho	2,096	28,388
Wyoming	53	10,154
Colorado	641	42,505
Utah	454	21,317
Nevada	413	9,739
New Mexico	297	11,548
Arizona	16	9,000
MOUNTAIN	4,842 (1.4%)	160,798 (3.8%)
Washington	9,865	138,709
Oregon	6,032	100,793
California	346	77,456
PACIFIC	16,243 (4.8%)	316,958 (7.5%)
UNITED STATES	337,088	4,199,941

*—Data for calendar year 1951 cover sales to retail dealers only.

**—Based on a varying sample which includes sales to wholesalers as well as retail dealers.

Above figures are those gathered by the Institute of Cooking and Heating Appliance Manufacturers, Washington 8, D. C., covering a sample of the industry. The study, "Analysis of distribution of vaporizing pot-type oilburning space heaters by states," estimated the total of 337,008 units reported sold in 1951 represented 46% of industry total; the 4,199,941 units sold in the six year period from January 1, 1946 through December 31, 1951 were estimated originally to represent 60% of industry total, later revised to 65.82%.

complete fuel heat and power service. Pocahontas and Pickering have a joint business history dating back to 1909 when the first New England cargo of "Original Pocahontas" was sold to the late George W. Pickering.

Davenport sees the merger as assuring more efficient and reliable service to New England fuel users by combining the recently modernized facilities of both firms. Last year they executed a joint agreement for handling oil tankers at the new 20 million gallon Ocean Oil Terminal at Salem, Mass.

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ICHAM analyzes sales of pot-type space Heaters

THE INSTITUTE of Cooking and Heating Appliance Manufacturers, Washington 8, D. C., has prepared a special statistical study, "Analysis of distribution of vaporizing pot-type oilburning space heaters by States," covering the calendar year 1951 and the six year period from January 1, 1946 through December 31, 1951. Fifteen firms reported to the Institute their sales during 1951 made to retail dealers, revealing a total of 337,088 units. This was estimated to be 46% of total industry activity. Sales reported to the Institute for the six years preceding December 31, 1951 were based upon a varying sample which included sales to wholesalers as well as retail outlets. They totalled 4,199,941 units, estimated to be 60% of total industry activity during that period.

Sales last year and totals for the six year period broken down by states are reproduced in the table.

OHI offering insurance Plan to Manufacturer Divisions

IN AN EXTENSION of the group insurance plan, originally made available to members of the Distribution Division, Oil-Heat Institute of America, Inc., members of the Manufacturer and Accessory Divisions of the Institute are eligible to participate, effective June 15. Any active member in either Division who has two individuals eligible to join the plan can apply. New members have a period of 90 days to join, after which evidence of insurability may be required.

Eligible individuals of member firms in the Manufacturer and Accessory Divisions are actively employed officers, division and department heads earning more than $6,500 annually. Those who are under 65 years are insured for $10,000 at a monthly cost of $11; those over 65 years of age are insured for $5,000, costing $5.50 a month. Each company makes the monthly premium payments on the basis of a bill sent from the Institute's office. The entire cost may be deducted as a business expense for income tax purposes. New employees are enrolled at the time of the monthly remittance, along with any terminations or changes.

Terms of Coverage

Complete terms of the Group Insurance coverages are contained in the Group Insurance Policy issued by State Mutual Life Assurance Company of Worcester, Mass., to the Trustees for the Oil-Heat Institute, Distribution Division, Insurance Trust. Individuals receive their own certificates, outlining benefits.

The Distribution Division has been most successful in selling the plan to eligible members and at present is working on its third million dollars worth of insurance.

The response of the Manufacturer and Accessory Divisions has been good and it is anticipated that enough reservations will have been received by June 15 to make it possible to put the plan into effect.

Complete details are available from the Oil-Heat Institute, 6 East 39th St., New York 36, N. Y.

Imagine doing business with 1890 methods!

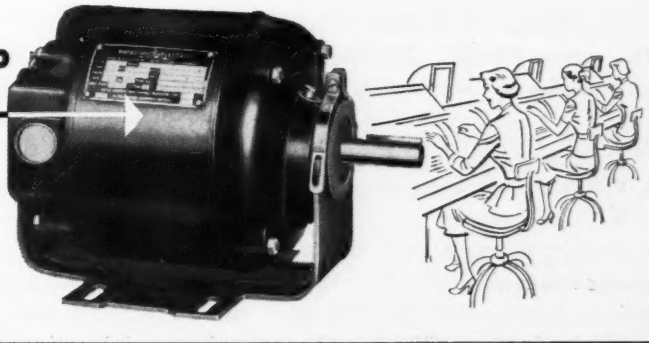
The bookkeeper with his eye shade and sleeve garters, at a high top desk, typified the tempo of business in the Gay 90's. His was a tedious and exacting job. Motorized equipment such as adding machines, calculators, bookkeeping machines, tabulating machines, postage meters, and letter openers, to name a few, were still in the future.

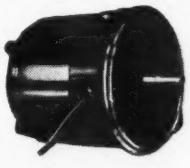
During this period Emerson-Electric was founded. Since then motors have been supplied to scores of leading manufacturers of labor-saving devices.

They staked the reputation of their products on Emerson-Electric motors, and with the passing years became nationally known for dependable service.

Consider this 62-year-old reputation for dependability and efficiency, earned by Emerson-Electric motors for use in business, on the farm, in the home and in industry. Your inquiry is invited on the complete line of standard motors in horsepower ratings from 1/20 to 5, and hermetic motor parts 1/8 to 10 H.P.

MODERN BUSINESS **IS POWERED WITH** ELECTRIC MOTORS





OIL BURNER MOTORS

No oil burner can be more reliable than the motor that drives it. Emerson-Electric oil burner motors are specially designed for this job . . . totally enclosed, extra quiet, need minimum maintenance, meet Underwriters' Laboratory specifications. Write for Oil Burner Motor Data Bulletin No. M131

THE EMERSON ELECTRIC MFG. CO., St. Louis 21, Mo.

EMERSON ELECTRIC

MOTORS • FANS APPLIANCES

LEADERS IN THE FAN AND MOTOR INDUSTRY SINCE 1890

Fueloil & oilheat

Ulrope tells New Jersey Group of Need for price Adjustments

L. E. ULROPE, vice-president for marketing, Esso Standard Oil Co., N. Y., N. Y., said in his address before the 14th annual convention of the Fuel Oil Distributors of New Jersey, held May 1 and 2, at the Hotel Berkeley-Carteret, Asbury Park, N. J., that an immediate increase in heating oil price ceilings was necessary along the East Coast to avoid shortages next winter.

Ulrope urged prompt action by the Office of Price Stabilization, irrespective of a request made to the OPS by "a segment of the industry" to postpone any immediate decision for a price adjustment.

"It is to be regretted if their (OPS') decision is delayed or altered by representation by a segment of the industry," Ulrope said, "which is not faced with out-of-pocket loss in the movement of oil from the Gulf under current East Coast ceilings."

While Ulrope did not mention the group by name, it was apparent that he was referring to a recent request made by the Empire State Petroleum Association, a jobber-distributor group in New York State, that the OPS withhold any price adjustment until October 1. ESPA's request has since been modified.

Willard Hedden, The Hedden Co., Dover, reminded the New Jersey independent dealers at the morning session, May 2 to remember the customer and think from their point of view. "Coddle the customers just a little bit more," he said.

Hedden, who stepped in for Harry Bodine who was unable to speak because of illness, talked on "Retailing Fuel Oil."

He thought it was a good idea to have major companies in the retail fuel-oil business because their presence in the market tended to stabilize the price. He pointed out that it isn't necessarily the price that sells fueloil, but rather the service the company offers.

Kirk B. Shivell, Oil Heating Marketing Counsel, spoke on "Are you Making A Profit?"

Shivell pointed out that too many dealers look to oil as their only source of good profit. He said many dealers are losing money on service and equipment sales.

"Here is how bad this condition is," Shivell said. "A survey made early this year indicated that less than 13% of fueloil dealers in this area are definitely making money on their service departments. The remainder either are losing money, hope they are breaking even, or admit that they don't know how bad off they are."

Equipment Sales

"The equipment sales picture is made even worse," Shivell told the dealers, "by the fact that many companies think they are breaking even or better, when realistic accounting would show that they are sinking deep in red ink."

Shivell suggested a way to alleviate service department losses and quite possibly make a profit. The dealer should provide complete maintenance with parts contracts. He told of a recent survey made for the Coastal Oil Co. which showed that 55.5% of dealers who sold this type of contract made money on it and another 22.2% at least broke even.

He also told the group that there are two things which they can do to prevent losses on burner sales. First, take a firm stand and resolve never to sell a burner unless they make a fair profit. Secondly, work through their state and local associations for a wider understanding of the economic facts of life. "In this way," Shivell said, "some of your competitors may also come to take a more realistic attitude toward burner sales."

Other prominent people who addressed the group were Benjamin Rothstein, administrative officer in charge of liaison with the Wage Stabilization Board in the New York-New Jersey region and Joseph C. Turbett, investigation supervisor for the Wage and Hour and Public Contracts Divisions, both of whom spoke on "Wage Stabilization"; Paul L. Troast, chairman, New Jersey Turnpike Authority, who spoke on "The New Jersey Turnpike and Your Business"; William M. Amos, manager, department of farm marketing, Gulf Oil Corp., N. Y., N. Y., whose subject was "The Challenge to Us All" and T. L. Shaffer, vice-president, Congoleum-Nairn, Inc., who spoke on "America Revisited."

Elections to the board of trustees were also held. Elected for a term expiring April 30, 1954 were: Norman F. Ruhle, Ruhle & Sons, Ridgefield and Charles Jacobs, Jacobs & Widman, Union City.

Elected for a term expiring April 30, 1955 were: William M. Norton, Norton's Fuel Service, Phillipsburg; Thomas Miller, Stephens-Miller Co., Summit; Robert MacKinney, MacKinney Oil Co., Highland Park; William H. Sortor, Sunrise Oil Co., Englewood; Willard Hedden, The Hedden Co., Dover; John Eggers, John Eggers & Bros., Jersey City; Floyd R. Opio, Fairlie & Wilson, Newark and Herman Mendell, Sparta Coal & Oil Co., Sparta.

Murray wants Texas Gas kept within the State

TESTIFYING in the trial of Texas gas companies seeking refunds of the State's gas "gathering" taxes, Railroad Commissioner William T. Murray, Jr. said Texas would do better to keep its gas at home rather than export it to other States. As reported in *The Journal of Commerce*, Mr. Murray called gas the only good fuel Texas offers and said the State would become one of the most popular in the country if the supply remains available to local industry. He conceded that pipelines have provided a market for Texas gas, much of which previously had been wasted in the oil fields.

Taking a long range view, though, Mr. Murray was of the opinion that the State should not tie up its gas reserves on long term contracts with interstate pipeline companies. Only fifteen years of gas supply is in sight, he said, while other industrial areas have "thousands of years" supply of coal.

NEW Century Lo-boys with

CONTROLLABLE HUMIDIFIER, AIR WASHER AND PURIFIER

Enthusiastic buyers increase Century dealers' profits!

Like all heating men, you realize the true facts about humidified heat. You know humidifiers are unsatisfactory unless they can be accurately regulated to compensate for weather changes plus differences in climate and home construction. You also know how easy and profitable it would be to sell a heating line offering built-in humidity that can be controlled to the exact degree desired.

Only Century offers this important selling advantage. It's a sales-closing exclusive for Century dealers. Century dealers proudly tell their customers, "YOU—not the manufacturer—determine the exact degree of humidity for your home. A simple humidistat, placed by your thermostat, permits accurate humidity control and makes your home a more comfortable place to live. You enjoy this heating 'extra' only when you install Century." When you sell the progressive Century automatic heating line you profit from a line that's years ahead of current standards. It's a complete line too — 38 gas and oil units that sell and satisfy. Write today for the Century catalog and complete details. You'll be glad you did.

CENTURY ENGINEERING CORP.,
CEDAR RAPIDS, IOWA

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Advertised in Better Homes and Gardens and Small Homes Guide.

CENTURY ENGINEERING CORP., 416 Third St., Cedar Rapids, Iowa
Please send me further details on your complete automatic heating line.

- ☐ Gas Hi-boys
- ☐ Gas Lo-boys
- ☐ Gas Counterflow
- ☐ Gas Conversion Burners
- ☐ Oil Hi-boys
- ☐ Oil Lo-boys
- ☐ Oil Counterflow
- ☐ Oil Conversion Burners
- ☐ Hot Water Boilers

Name _____

Address _____

City _____ State _____

. . PIONEERS IN AUTOMATIC HEATING FOR OVER 26 YEARS

ESPA Meeting hears Burrill and Swensrud on oil Supply

THE ANNUAL two-day convention and trade exhibit held by the Empire State Petroleum Association took place on May 12 and 13 at the Hotel Roosevelt, New York, N. Y., highlighted by addresses of Sidney A. Swensrud, president of the Gulf Oil Corp., guest of honor and principal speaker at the banquet and Cecil L. Burrill, director of the program division, Petroleum Administration for Defense, who discussed "The world's oil and East Coast supplies."

Mr. Burrill described the possible effect of the strike of oil industry workers on supply and said it probably would require increased refinery runs of more than 150,000 barrels a day for the next six months to meet expected demands. Refinery runs, he estimated, will have to be increased by about 80,000 barrels per day for each week the strike continues to insure that adequate inventories are available at the start of the next heating season.

On the assumption that there would be no prolonged oil strike, Mr. Burrill feels next winter's peak petroleum demands, which he estimated would be close to 8.5% above last year's, will be met. Last winter he pointed out the industry just managed to avoid trouble on the East Coast even though the weather was milder than normal, and if substantially colder weather is encountered next winter the heating oil supply in the area could be critical. He added that an increase in East Coast heating oil ceilings is needed to prevent supply troubles this coming heating season.

Mr. Burrill forecast an increase of 7.7% for distillate oils this year and explained that the 8.5% predicted for next year took into account a return to normal weather. Total oil demand in the first quarter of 1953 is expected to reach 3,459,000 barrels daily along the East Coast. Residual oil supply is expected to improve in 1952, he added, but overall demand for this product probably would show a 1.6% decline from last year due to reduced demand in the first quarter of this year.

He reiterated the advice to oil distributors and jobbers to fill their storage during the Summer and declared that refinery capacity and crude oil available are adequate. The biggest bottleneck is found in tankers and since little improvement is expected soon, it is apparent that high tanker rates will prevail throughout the next heating season.

Mr. Swensrud defended the earnings of the petroleum industry and stated that if the industry is to expand its facilities to meet demands for petroleum products it must be done primarily from reinvestment of earnings in the business. He called the difficulty of finding funds to finance necessary capital expenditures the greatest problem the oil industry faces today.

Swensrud sees huge Gains by 1960

Today's domestic consumption of 7 million barrels a day of petroleum products will increase to about 10 million barrels by 1960, Mr. Swensrud said, and while the industry has invested well over $15 billion for expansion, replacements and improvements since V-J Day, it faces the necessity to meet an additional expansion bill totalling more than $18 billion between now and the end of next year "if the expansion program considered by the Petroleum Administration for Defense to be essential over the next 18 months is to be carried out." The industry can meet these obligations, he continued, unless hampered by shortages of materials, burdensome government regulations or by restrictions of the profits needed for expansion, with this looming as the most serious danger.

"The only profit the stockholder gets," Mr. Swensrud observed, "is the part paid out in dividends. In our industry for many years now this has averaged less than 40% of the total profit and represents a return of less than 5% on the capital invested. This, I think, even a socialist would agree is not exorbitant!". He deplored the attitude of some high-placed Government officials who "seem to think that profits are some ill-gotten gain." But, he added, in our modern industrial society "corporate profits must be thought of as being in very large part the corporate savings from which production can be increased—they are the life blood of private capitalism."

If necessary facilities can be provided, Mr. Swensrud said in talking of oil consumption, exclusive of Russia and her satellites, world consumption by 1960 will be about 16 million barrels of oil daily. And, because oil discovery in the United States is becoming harder rather than easier, he expressed the opinion that our best national interest is in using reasonable quantities of oil from other areas of the world where reserves are abundant in relation to needs. He did not advocate the displacement of sound levels of domestic production with foreign oil, but rather that our national policy will be served best by supplementing domestic production with imported crude to the extent necessary to leave the country with an ample margin of safety. "We would have to look a long way into the future before an oil shortage would appear," he declared, "provided we have access to these (foreign) reserves and can make enough money to raise the capital required for transportation and other needed facilities."

Additional Storage required

Mr. Swensrud foresaw a 10% national gain in demand for heating oils during the next heating season, based on normal weather, with a somewhat larger increase in the Northeastern states. Refineries should be able to supply this increase, he continued, if reasonable additions are made to storage facilities by all concerned and if cooperation is obtained from distributors and consumers in filling available storage during the summer months.

Heating oil prices should be decontrolled, he concluded, or the industry should at least be granted a reasonable increase in price ceilings to cover increased transportation and other costs. Since price ceilings became effective tanker transportation rates have in-

Types 111 (gas) — 211 (oil) Gravity Furnace — Fills the bill for gravity installations. 90,000 Btu input. Compact, just 51½" high, 25½" wide. Shipped assembled with solid steel base. Provides quick, low cost installation. Type 211 available with Mueller's Atomized *Sunburst* Oil Burner. *Convertible.*

Types 112 (gas) — 212 (oil) Winter Air Conditioner — 90,000 or 110,000 Btu input. Compact, shipped assembled on a solid steel base. Large, quiet blower. Type 212 available with Mueller's Atomized *Sunburst* Oil Burner. *Convertible.*

Four Leaders... for every need in today's building market

Mueller Climatrol

with "Designed Convertibility" ... for Oil, for Gas

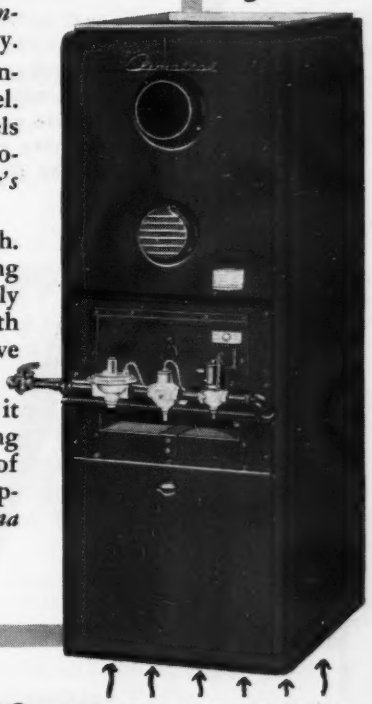
Whatever you need for today's new house construction — you name it — Mueller has it . . . gravity, forced air, highboys, and counterflows. Illustrated here are four new Leaders, each of which is designed, engineered and *nationally accepted* for new houses in all parts of the country.

Each of these units is available in oil or gas and is convertible — operating with equal efficiency on either fuel. The gas models are approved by A.G.A. The oil models are Underwriters' Laboratories, Inc. listed for close-to-combustible installation and are available with *Mueller's Atomized Sunburst Oil Burner.*

Don't overlook the "designed convertibility" of each. For "Oil today — Gas tomorrow" is a potent selling story which will help you get more business, especially if fuel is restricted in your area. This flexibility with fuels permits you to maintain lower inventories, but have complete coverage of your market needs.

So — whatever you need in heating — remember it pays to follow the leaders. Write today for convincing information about these units and the complete line of Mueller Climatrol heating and air conditioning equipment. *L. J. Mueller Furnace Co., 2050U W. Oklahoma Avenue, Milwaukee 15, Wisconsin.*

Types 115 (gas) — 215 (oil) Counterflow — 110,000 or 150,000 Btu input. A natural for perimeter heating, for slab or crawl space homes. Shipped assembled and prewired. Type 215 available with Mueller's Atomized *Sunburst* Oil Burner. *Convertible.*



Types 114 (gas)—214 (oil) High Boy — 110,000 or 150,000 Btu input. Compact, space-saving. Ideal for basement, closet or utility room installations in small homes. Shipped assembled. Type 214 available with Mueller's Atomized *Sunburst* Oil Burner. *Convertible.*

95th Anniversary

Mueller Climatrol

FOR GAS FOR OIL FOR COAL

D-127

fuel oil & oil heat

creased substantially, but these additional costs cannot be recovered under present prices on the eastern seaboard.

The membership meeting of ESPA, held on May 13, re-elected Thomas A. Brown, Sentinel Oil Co., Inc., New Rochelle, N. Y., president for another term. Also re-elected were Harry B. Hilts, secretary; Charles A. Lockard, assistant secretary and E. C. Drake, Drake & Mills Co., Syracuse, treasurer. New officers named were the following 4 vice-presidents: George L. Savory, Savory Oil Co., Binghampton, N. Y.; Frank D. Bertch, Webaco Cil Co., Webster, N. Y.; Richmond F. Meyer, Mid-Hudson Oil Co., Poughkeepsie, N. Y. and Joseph G. Mintzer, Mintzer Petroleum Corp., North Troy, N. Y.

J. Warren Pfeifer, Canlake Petroleum Corp., North Tonawanda, N. Y.; Kenneth Buckley, Buckley Petroleum Products, Inc., Syracuse, N. Y. and Howard Rinker, Rinker Oil Co., Cuba, N. Y., were named to the board.

The board at its meeting, changing a stand taken in a resolution adopted April 7 to ask OPS to withhold price adjustments for fueloil until October 1, adopted a new resolution which leaves the effective date of any price changes up to OPS.

President Brown, who acted as chairman at luncheon meetings held on both days, spoke out for setting up of a separate sales division by companies who conduct both direct and indirect marketing. A vice-president in charge of marketing operations preferably should head the division, which Mr. Brown envisioned would improve relations between the independents and the large companies and be a deterrent to excessive Government regulation of the oil industry.

Other speakers at the meeting were F. Raymond Kraemer, financial consultant, who gave an illustrated lecture on "Jobber-distributor profit requirements"; Frederick H. Meeder, president, Richfield Oil Corp., who discussed "Jobber-supplier relationships." Jobber problems, wage and salary stabilization regulations also were topics covered in formal sessions.

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U. S. Department of Labor Fueloil Prices (March)

FIELD INVESTIGATIONS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published, including applicable state and local taxes. Those in the table that follows were taken March 15 (cents per gallon):

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	15.07	14.57	12.60	..
Manchester	15.40	14.90	13.30	..
Portland, Me.	14.40	14.40	12.40	..
Buffalo	15.25	..	14.04	14.04
New York	..	..	12.71	..
Philadelphia	..	13.43	12.20	..
Chicago	14.83	14.48	13.57	13.57
Detroit	..	15.04	14.01	..
Milwaukee	..	15.04	14.10	14.00
Baltimore	..	13.36	12.44	..
Wash., D. C.	..	13.84	12.85	..
Jacksonville	..	14.87	13.25	..
Norfolk	..	13.60	12.20	12.20
Richmond	..	14.00	12.60	..
Savannah	..	16.58	13.97	..
New Orleans	..	14.33	12.77	12.77
Portland, Ore.	..	14.50	12.10	..
San Francisco	..	13.87	11.54	..
Seattle	..	15.33	13.20	..

MONARCH NOZZLE FILTERS SOLVE CLOGGING TROUBLES

Take a MONARCH Tip (Stainless Steel) . . . add a MONARCH Porous Bronze Filter . . . Result—Tops in Nozzle Performance without troublesome clogging from dirt!

The MONARCH Filter is equivalent to 200 mesh screen but has the advantage of being strong and rugged one piece construction—no messy felt or numerous parts to lose on the cellar floor. Costs no more than standard 200 mesh screen strainer.

New

"48" Nozzle Box

Don't jumble your nozzles loosely in your tool box like "nuts and bolts" if you expect them to be usable. Carry as many as 48 nozzles securely in this sturdy, compact steel box.

New

Nozzle-Firebox Slide-Chart

No more digging through catalogs for proper nozzle capacities for certain loads, correct fire box sizes for different firing rates, or nozzle capacities at different operating pressures. This pocket slide-chart gives all these (and more) figures at a glance.

DEALERS: Buy from your Monarch Jobber

MONARCH MFG. WORKS, INC.

2503 E. ONTARIO ST., PHILADELPHIA 34, PENNSYLVANIA

Canadian Sales Agents: (Except B.C.) Canadian General Filters Ltd., 2679 Danforth Ave., Toronto 13, Canada

Master Kraft

REG. U. S. PAT. OFF.

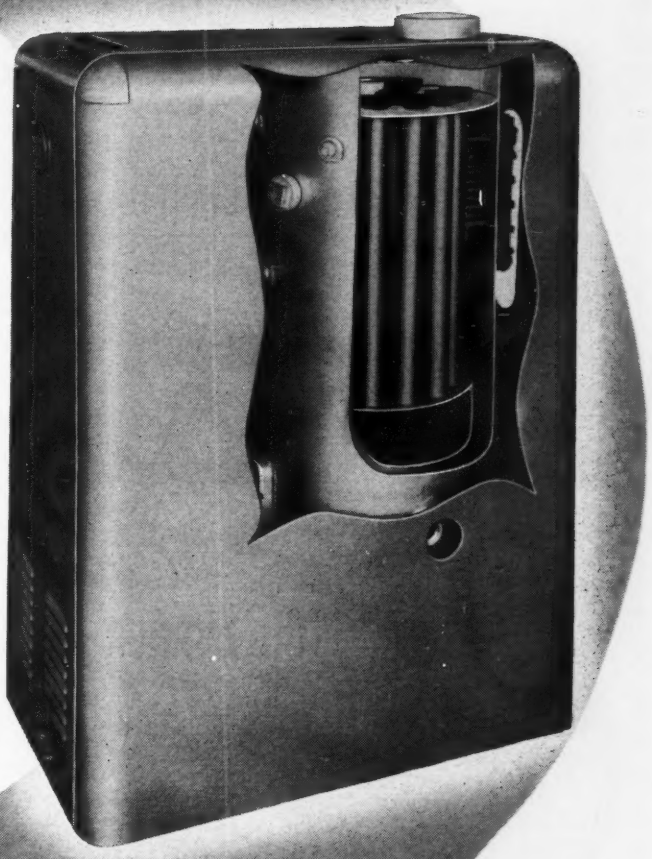
Economy Boiler

A QUALITY BOILER — PRICED for the MASS MARKET

This new boiler unit is attractively priced for the mass market — offers exceptional value for the money — enables Master Kraft dealers to go after volume sales.

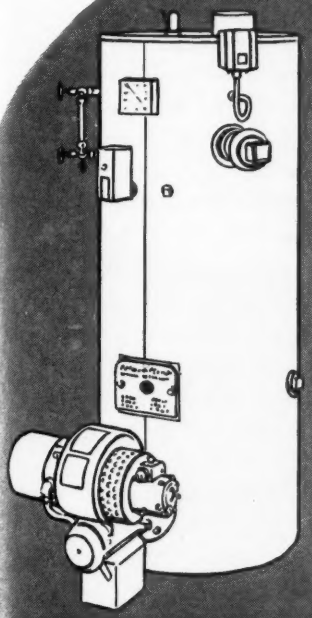
Features for easy selling and easy service are: Removable top for easy cleaning — 200 GPH tankless heater which is reversible to give top performance on either steam or hot water — every inch of welding is external (no hidden welds) — equipped with reliable, high performance, patented Master Kraft oil burner, and a gas burner is available at low cost.

Rated 300 feet steam or 480 feet water. Now — a genuine Master Kraft boiler priced within reach of every pocketbook. Mail the coupon below for further details.



Two Styles of Jacket

This boiler comes with a "wrap-around" flush jacket as shown below or with the "cover-all" extended jacket as shown at right. They are both exactly the same boiler, controls, tankless heater, and burner except that the style pictured at right completely encloses everything as shown. Both jackets are the same beautiful blue hammered silver finish.



Burns OIL or GAS

200 GPH Tankless Heater

Extra Heavy Steel Shell and Vertical Tubes

No Hidden Welds

High Efficiency

Priced for the Mass Market but Quality Built by

HARVEY-WHIPPLE, INC.

SPRINGFIELD, MASS.

A PIONEER IN AUTOMATIC HEATING

Master Kraft
REG. U.S. PAT. OFF.
AUTOMATIC HEAT

HARVEY-WHIPPLE, INC.
Dept. F0-37, Springfield 2, Mass.

Please send me full information about the new *Master Kraft* Boiler.

Name.....

Street.....

City..... State.....

Treat Jobbers Individually says Davenport at API, Boston

LEADING OFF THE afternoon of principal speakers at the API's Division of Marketing meeting in Boston May 19, Horace Davenport of Salem pointed out that marketers are individuals, to be evaluated as such and not to be treated with in the mass.

The jobber relationship with his supplier must be entirely man to man and cannot be dealt with on an industrywide basis, he believes. He disparaged the "collective bargaining" approach to jobber-supplier problems, feeling that we are losing sight of fundamentals down this road and endangering our independence. He recalled attempts in the coal industry to get things done through joint producer-retailer committees, all of which were "a flop."

New England, Davenport believes, has more real independence in oil marketing than any other region. "We fight out our own problems," he went on to say, "and we have learned to take it on the chin from the integrated companies and they take it from us. No New England oil man asks favors from the big companies . . . he expects to be a big integrated company himself some day."

Discussing brand selling, he believes that it is growing but thinks that the local marketer must be emphasized fully as much as the name of the supplier. "If the customer had wanted to buy from a major he would have done it in the first place," he illustrated, "and if the local marketer's name is subordinated to the big company he may often lose the customer.

Sensible Attitude

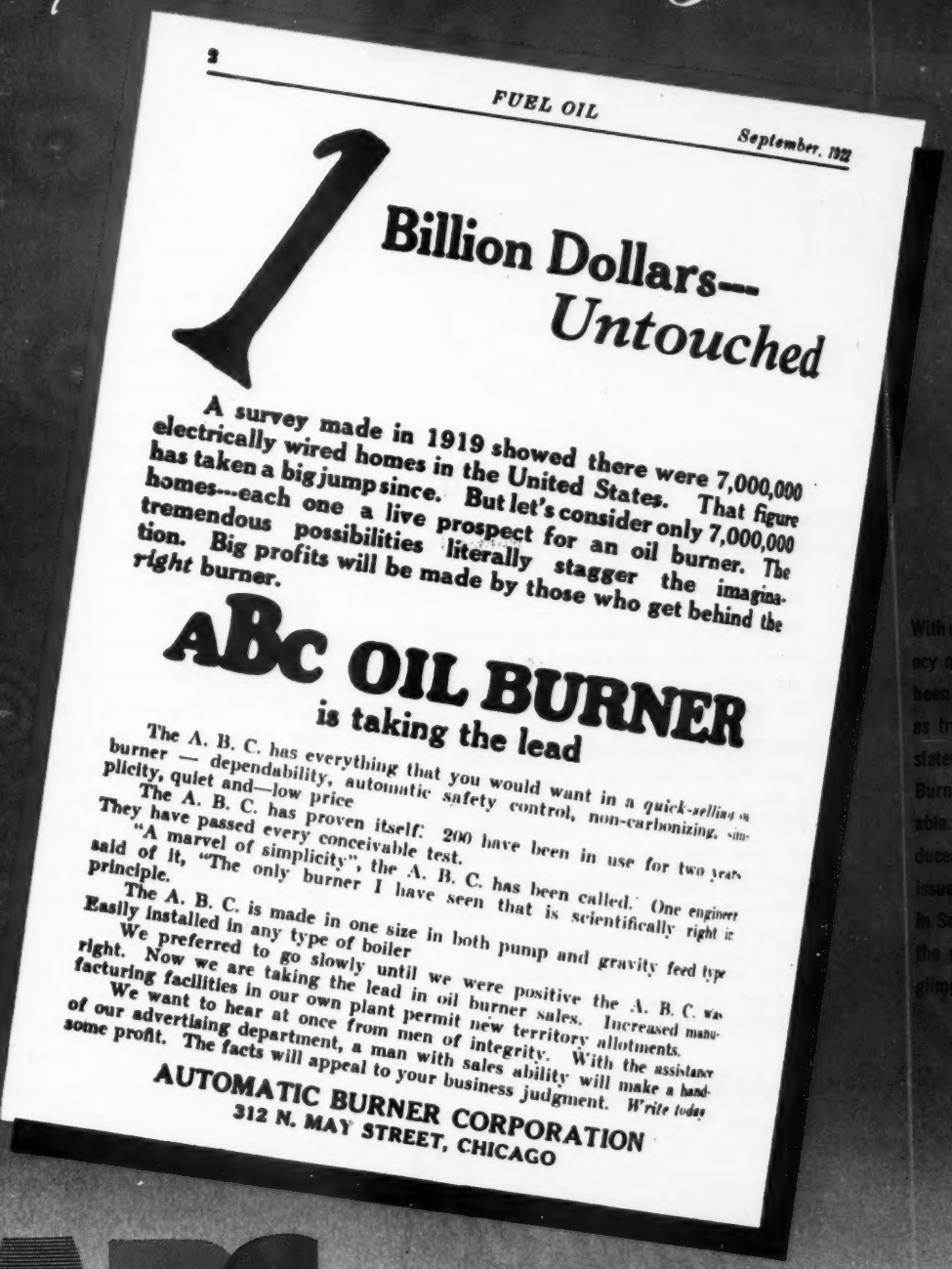
The second speaker, Bruce K. Brown, who heads PAD until his retirement June 1, made a plea for more sensible attitudes by business men toward Government and vice-versa. The oil industry must by its very nature do some work with Government and for oil men to categorically place all Government men as long hairs or bureaucrats is defeating any reasonable chance for effective teamwork. A lot of government men are high class individuals, he insisted, particularly those from industries, who have come in to do important jobs where their backgrounds are most valuable.

We'll always work with Government, he went on to show, in such spots as the Bureau of Mines, the Army-Navy Petroleum Board, the Coast and Geodetic Survey, Public Lands Administration and several others. These are activities most valuable to our industry and are indispensable to sound management. True, Government has some screwballs, but so does industry, he mentioned, and the best way to clean up such situations is through better and more objective approaches to problems.

Percy Spencer, Sinclair president and the third speaker, believes that God loves the marketers and their

℞ Sure Cure for servicing headaches—
Eddington
OIL BURNER NOZZLES
FACTORY TESTED TO INSURE PERFECT OPERATION!
RIGHT FOR SPRAY ANGLE, ATOMIZATION, AND RATED CAPACITY!
LARGE CAPACITY MONEL STRAINER KEEPS ORIFICE AND SLOTS FROM PLUGGING!
Speed up installations and check-ups— EDDINGTON FLEXIBLE INSPECTION MIRROR
We'll be glad to send you complete information on any Eddington Products. Write today.
Eddington METAL SPECIALTY COMPANY
EDDINGTON • PENNSYLVANIA
Makers of: FILTERS • NOZZLES • VALVES • STABILIZERS
AIR CONES • STRAINERS • INSPECTION MIRRORS
ADAPTORS • SERVICEMEN'S NOZZLE KITS

True in 1922... Still true 30 years later



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FUEL OIL September, 1922

1 Billion Dollars— Untouched

A survey made in 1919 showed there were 7,000,000 electrically wired homes in the United States. That figure has taken a big jump since. But let's consider only 7,000,000 homes—each one a live prospect for an oil burner. The tremendous possibilities literally stagger the imagination. Big profits will be made by those who get behind the *right* burner.

ABC OIL BURNER is taking the lead

The A. B. C. has everything that you would want in a *quick-selling* oil burner — dependability, automatic safety control, non-carbonizing, simplicity, quiet and—low price

The A. B. C. has proven itself. 200 have been in use for two years. They have passed every conceivable test.

"A marvel of simplicity", the A. B. C. has been called. One engineer said of it, "The only burner I have seen that is scientifically right in principle.

The A. B. C. is made in one size in both pump and gravity feed type. Easily installed in any type of boiler

We preferred to go slowly until we were positive the A. B. C. was right. Now we are taking the lead in oil burner sales. Increased manufacturing facilities in our own plant permit new territory allotments.

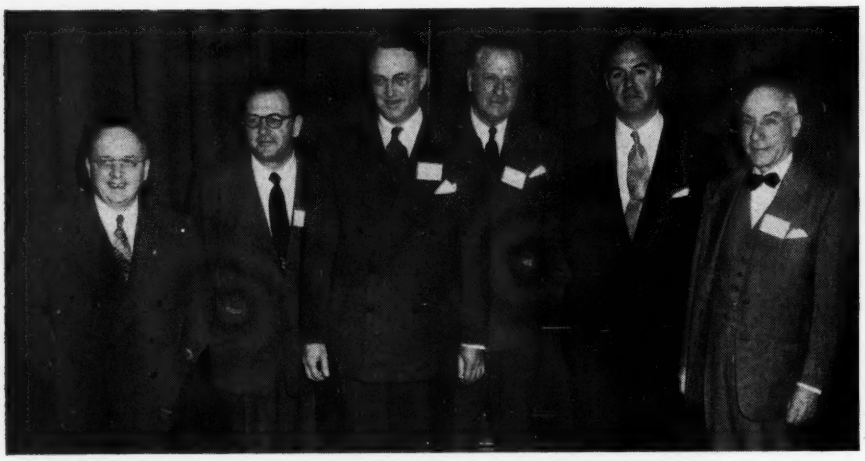
We want to hear at once from men of integrity. With the assistance of our advertising department, a man with sales ability will make a handsome profit. The facts will appeal to your business judgment. *Write today*

AUTOMATIC BURNER CORPORATION
312 N. MAY STREET, CHICAGO

With uncanny accuracy, a prophecy made thirty years ago has been fulfilled. In like manner, as true today as in 1922, the statements made for A B C Oil Burners have proved dependable. The advertisement reproduced here is from the third issue of Fuel Oil which appeared in September, 1922. Reviewing the past sometimes affords a glimpse into the future.

ABC OIL BURNERS

AUTOMATIC BURNER CORPORATION
1823 CARROLL AVENUE • CHICAGO 12, ILLINOIS



This sextet *figured prominently in the API Division of Marketing Boston meeting on May 19 and 20. Left to right: Harry J. Kennedy, Continental Oil Co., who presided; J. Ed Warren, slated to be next deputy administrator of PAD; Bruce K. Brown, present deputy administrator; P. C. Spencer, president of Sinclair Oil Corp., Horace E. Davenport, president of the Independent Oil Men's Association of New England and R. M. Bartlett, Gulf Oil Corp., and program chairman.*

You'll get the Big Ones...
...IF YOU USE THE RIGHT BAIT!
The big ones are there, just waiting to be caught—but they won't snap at just anything!
It's the same with oil burner prospects. Plenty of big profit sales are there for the dealer who's got the right bait on his sales line.
ELECTROL dealers know from experience that an ELECTROL is a natural for pulling in all kinds of profitable sales. ELECTROL has the last-a-lifetime features no other can match. Meets today's demand for more honest dollars and cents value. And there's an ELECTROL burner to meet every heating requirement.
NOW is the time to fish for the big ones in your area. And it's really worthwhile with ELECTROL for bait!
All the bait you need:
Oil Burners• Air Conditioners• Water Heaters• Boilers
A FEW CHOICE EXCLUSIVE AGENCIES STILL AVAILABLE—WRITE NOW!
SINCE 1918
ELECTROL
BURNER MANUFACTURING CO., INC.
Rutherford New Jersey
FAMOUS BALL FLAME EFFICIENCY
ELECTROL
Finest Since 1918
YOURS FREE!
For complete details on the Electrol Line of Oil-Fired Heating Equipment, write for your free copy of this new Electrol booklet.

troubles because there are so many of them. He said that it was hard to take issue with geologists and the other scientific levels of the industry because they had the facts but it's always open season on marketers.

He deplored the disposition, growing in the industry, to take our troubles to the "Great White Father" and preferred that we slug it out within the family. He thinks that trade associations are wonderful per se, but that they don't belong in the realms of contracts and margins. Blaming the majors for the marketing troubles so current today, he is sure they would disappear if the suppliers would spend three times as much time with the jobbers and fueloil distributors.

At the next day's general committee meeting, reports were heard from speakers for the Division's several standing committees. Of most interest to fueloil marketers were these: 1) a Market Research Committee is being set up under John Seubert of Jersey Standard; 2) a Jobber-Supplier Committee was also approved to be in operation soon, to explore a restricted list of joint problems, but excluding for legal reasons any economic approaches; 3) the Fueloil Subcommittee under J. L. Minner as chairman got approval for two studies to be undertaken during the coming year. Special task committees are to be appointed to go into the projects. One group will explore the whole problem of drop size differentials (or tank size) from the consumer viewpoint as well as the distributor's. The other group will study the implications of larger storage for the local marketer, all from a cost viewpoint. These papers, to be presented at the Spring meeting

next year, will be highspots of interests to fueloil men.

The next meeting of the Marketing Div. will be at the time of the Institute's annual meeting at Chicago in November and next year's Spring meeting will be at Dallas, May 4 and 5, in the Hotel Baker.

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NPC Committee named to study petroleum Storage

ON MAY 19 Chairman Walter S. Hallahan, National Petroleum Council, Washington 6, D. C., announced appointment of a committee on Petroleum Storage Capacity, in response to a request by the Deputy Petroleum Administrator that the Council supply up-to-date information on the subject. Continuing problems of mobilization have aggravated the need for such data and with periods of local or regional scarcity of supply of one or more petroleum products having been experienced and the danger of recurrence under emergency conditions, statistics on total petroleum storage capacity are vital.

The request asked that tankage capacities be separated into geographic areas, "for example, subdivision of the East Coast District into three parts: New England, Middle Atlantic and South Atlantic." And, "it would be particularly useful to divide also the Indiana, Illinois, Kentucky and Pacific Coast districts into smaller units that would conform better to operating practices."

Membership of the Committee, which is headed by L. S. Wescoat, consists of: Paul G. Blazer, Horace E. Davenport, B. A. Hardey, Harry B. Hilts, Charles S. Jones, John M. Lovejoy, Nelson Maynard, L. F. McCollum; M. H. Robineau, Roland V. Rodman, Clarendon E. Streeter, Reese H. Taylor and W. W. Vandeveer.

❖

Edward S. Bliss announces the removal of the Bliss Oil Co. to larger quarters at 178th Fourth St., Fall River, Mass. The Bliss Oil Co. is a Winkler oilburner dealer.

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COMMERCIAL & INDUSTRIAL oilburning

Engineering Ideas make industrial Burners

Designers of rotary-cup Burners concentrate on both oilheating and viscosity Problems

by
Jean L. Dupuis

A PARTICULAR SENTENCE in the sales literature of the Superior Combustion Industries, Inc., hits the nail on the head. Coming after a discussion of a certain design feature, this sentence reads, "Like so many other features, it is simply functional."

"Simply functional" is in truth the answer to many of the questions about the Superior horizontal rotary cup burner, which were written down as the start towards obtaining the data for this article. For example, this was one of the big questions to be answered: Why does Superior Combustion use what it calls a four-hole hinge for its fully automatic models which use No. 6 oil?

A technical discussion would be the result, of course, of asking that question, and the discussion should prove worthwhile for specialists whose everyday work includes planning No. 6 oil jobs. The discussion might also, it was anticipated, prove educational for burner dealers, installers, and service men just getting started in the horizontal rotary cup field and perhaps wondering why different burner manufacturers recommend different fueloil heating arrangements for automatic installations using No. 6 fueloil.

Lots more will follow on why a four-hole hinge is used for the Superior rotary burners that burn No. 6 oil automatically, but all of it is merely an expansion of "simply functional."

Talking to specialists employed by Superior Combustion Industries, Inc., and asking them particularly the why's and wherefore's behind the design points of their burner, brought out the point that the ideas of their engineers naturally produced this particular design horizontal rotary cup burner. Problems had to be solved, and the engineers developed ideas to solve the problems. Out of this materialized the design of the oil burner.

In the field of automatic burners for No. 6 oil, many of the problems relate to the temperature and viscosity of the fueloil. Suppose in the storage tank of a certain installation there's the heaviest, most viscous fueloil that can be delivered legitimately as No. 6 oil. When the burner starts with its oil lines as cold as they ever become (the designer of the installation has control over the minimum temperature of the oil lines, of course), the oil pump of the burner system must be able to cause the oil to flow properly through the oil lines. Thus there's the problem of the starting of an automatic burner after an "off" period.

If the temperature of the fueloil flowing to the atomizing cup varies after the burner has started, then there's the problem of maintaining the gph rate or burning rate at precisely the proper value . . . though the metering involves oil which is relatively cool and thick, or hot and thin.

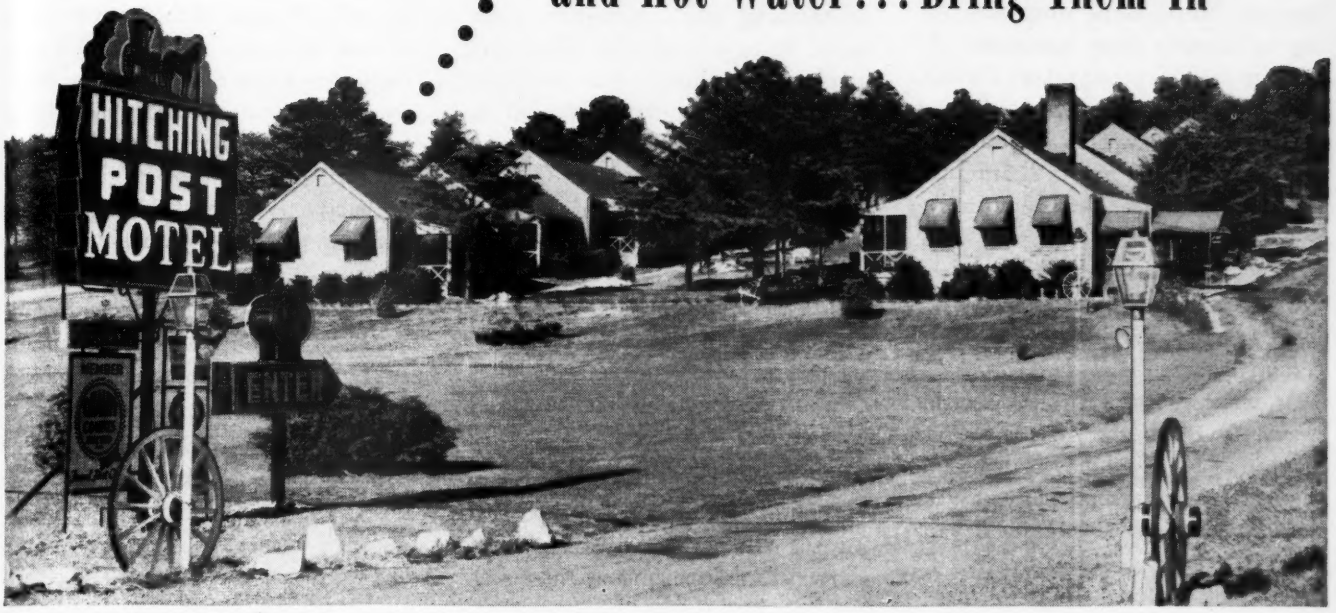
Another problem arises if the engineer designing a horizontal rotary cup burner decides that simply heating the suction line oil won't do, because he wants the oil flowing to the atomizing cup to be at a much higher temperature than he finds is suitable for the suction-line oil.

Solving such problems as these produced, then, the design of the Superior rotary burner.

Superior Combustion Industries, Inc., very much in the business of steam generators or boilers, is making 18 boiler sizes from 20 to 600 horsepower. The Superior rotary burner was originally designed for the Superior Steam Generator. Here's the way that came about. The first Superior Steam Generators were equipped with burners of other manufacture. Naturally, Superior Combustion had to be intensely interested in oilburner performance, since its efforts to arrive at peak oil-boiler performance depended on its efforts to arrive at peak oilburner performance. That Superior Combustion began to get its own ideas about oilburner de-

Junction box *of this No. 6 oil job which uses an electric oil heater. Notice the two ignition transformers and the Mercoid Visaflame.*

Modern Steel Boiler Heat and Hot Water... Bring Them In



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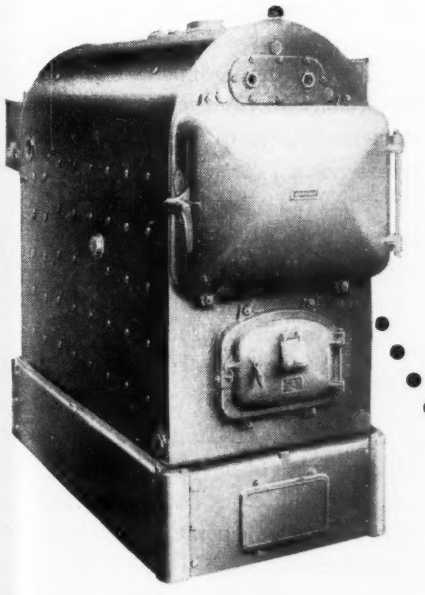

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sign is highly understandable. The company concluded, it relates, that if Superior Steam Generators were going to develop their maximum efficiencies using present-day fueloils, this could be done best with a burner of new design, capable especially of critical adjustment and of heating the oil to its best burning temperature before atomizing it.

Now, it must be understood that the No. 6 fueloil or Bunker C fueloil delivered today is not all the same. In certain cities this oil runs especially light, while in others it runs especially heavy. Even in the same city, one company's No. 6 oil may be light and thin, making it exceptionally easy to burn at high efficiencies; while another oil company's No. 6 oil may be exceedingly viscous and sediment-loaded, making it a most difficult oil to pump, meter, and atomize properly. Because of this, statements about oil preheating temperatures cannot be exact, as they could be if similar No. 6 oil were delivered to every No. 6 oil installation.

From the above discussion of the widely different kinds of No. 6 oil being delivered today, it can be understood why Superior now declares that it found that best combustion of No. 6 oil depended on heating it anywhere from 135° to 185° before attempting to atomize it. An easy-to-burn load of No. 6 fueloil, delivered to a certain installation, may need heating to only 135° for excellent atomization and combustion; additional heating of this oil would gain absolutely nothing. On the other hand, a difficult-to-burn No. 6 oil, being delivered to another installation, might according to Superior-Combustion-Industries engineers need heating to 185°. According to these engineers, there are No. 6 fueloils that must be heated to as high as 185° to produce highly efficient firing; lower temperatures for such oils definitely cause poor combustion and low efficiencies.

After deciding that the best combustion of No. 6 oil depends on heating the oil to the range of 135° to 185° before atomizing it, these engineers decided to produce a horizontal rotary cup burner to conform with their decision.

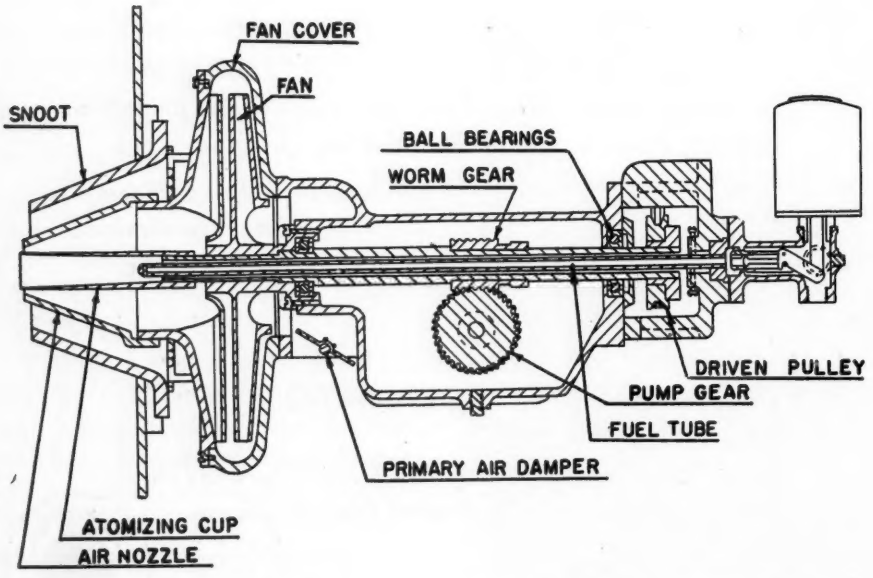
They decided beforehand on other items related to their conception of the perfect horizontal rotary cup burner. It had to have, for one highly important item, some type of "viscosity control" or "viscosity compensator" or something similar so that with the oil somewhat cooler or hotter than optimum the gph rate or firing rate would be precisely what it should be. Moreover this gph-control arrangement, they decided, had to be very simple in operation. To top it off, the device would have to function accurately and dependably over the full gph range of the burner; that's because they may want 12% CO_2 at the lowest firing rate and at the highest firing rate and at every modulated firing rate in-between, even though at any firing rate the oil might be appreciably cooler and thicker or hotter and thinner than design oil temperature.

Diag. 1 gives an idea of the overall design of the Superior rotary burner, but of course does not show the motor, located above the parts shown.

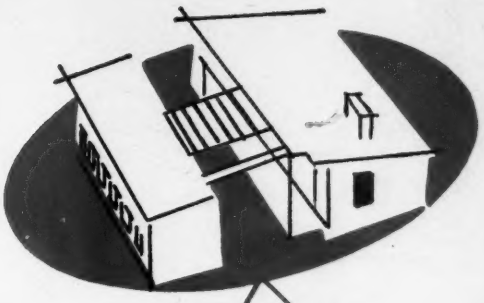
Here are some of the technical highlights which Superior-Combustion-Industries engineers point out concerning their burner:

1. It is the horizontal rotary cup type. Employing the atomizing-cup method of preparing the oil for combustion, the burner gains the well-known advantages of this time-tested method for burning oil. These include easy adaptability to automatic ignition; flexibility because the fire size can be shifted over a wide range with the burner in operation; large oil channels and ports throughout the burner that give freedom from plugging with gum, sediment, etc.; ability to atomize high-viscosity fueloil without heating it to the high temperatures needed for most types of industrial burners; ability to operate dependably at highest efficiencies practical; and adaptability to one-unit construction, with the ignition system parts, blower, shut-off valve, motor, and oil pump arrangement all as one easily-installed unit.

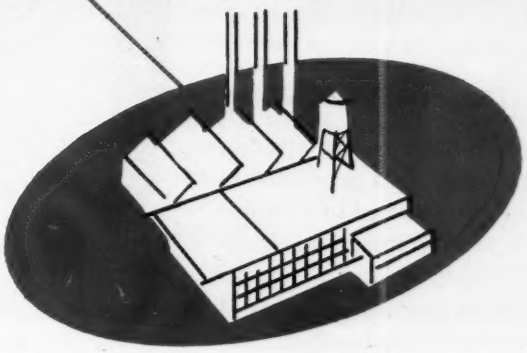
2. High-speed atomizing cup. The cup speed is over 4,000 rpm, exacting development work having proved that most efficient operation coincides to approximately 4,200 rpm cup speed. One great advantage of the belt-drive used in this burner is that it permits easy increase or decrease in the cup speed, thus gives design engineers great latitude regarding ascertaining the proper cup speed and using it. The design engineers are not forced to abide by the idea that a certain



Diag. 1—*Cross-sectional, schematic drawing of the Superior rotary burner. A stationary oil tube, which extends from the solenoid shut-off valve at the right to the atomizing cup at the left, runs through the hollow shaft that revolves at 4,200 rpm, and feeds the oil to the atomizing cup.*



from HATCHERIES to FACTORIES . . .



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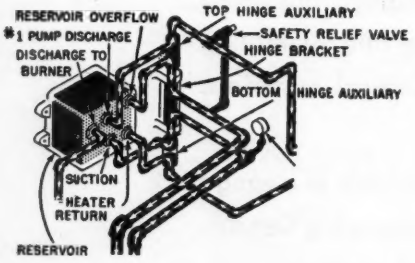
99

pre-selected cup speed is correct, for they know that simply switching to a drive pulley or driven pulley of a different size gives a different cup speed.

3. Standard NEMA motors are used. Standard motors are easily replaced and serviced in the field, when necessary. Standard motors are available for odd cycles, odd voltages, etc. The use of a standard NEMA motor is a corollary advantage to the use of the V-belt drive.

Four-hole Hinge for No. 6 Burners

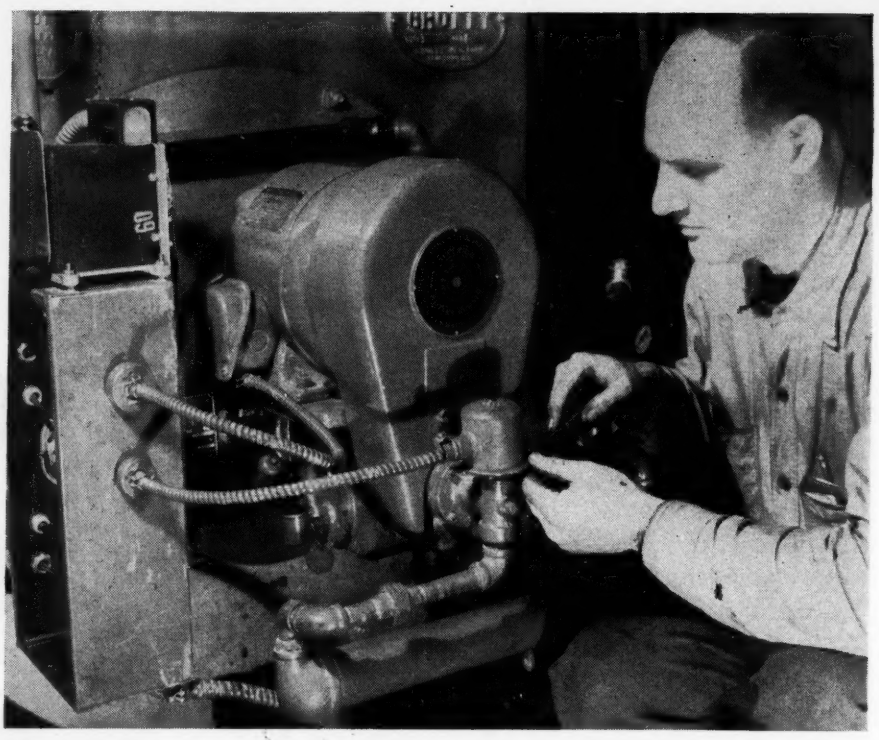
4. Four-hole hinge is used for No. 6 oil installations. This permits heating the oil to be atomized to a considerably higher temperature than is suitable for suction-line oil, an advantage which will be explained later in this article. Superior-Combustion-Industries engineers emphasize, however, that their having a four-hole hinge model for No. 6 oil has not caused them to lose any advantages there may be in a two-hole hinge model. They have a two-hole hinge model for No. 5 oil. They declare the two-hole hinge type of burner has the advantage of



Diag. 2—*Two-hole hinge bracket used for Superior rotary burners which use No. 5 oil. The suction line is shown equipped with a vacuum gage.*

simplicity and lower cost, and works well with No. 5 oil; but say that the more expensive four-hole hinge design and construction is to their experience necessary for best combustion of No. 6 oil or Bunker C oil.

5. Dual fueloil pumps, located in an oil reservoir. This is an essential part of the oil-handling system that insures dependable, trouble-free pumping of the oil from the storage tank, together with precise control over the gph rate or firing rate. Details on this will be given presently.



Notice *the electric oil heater connected in the line from the pump to the atomizing cup, on this No. 6 oil installation. This automatic heater provides hot oil for cold starts, but does not heat the oil during normal operation.*

6. Constant oil rate control. This is the feature that causes the fire size to be independent of changes in the temperature of the oil, and independent of the viscosity of the oil. This means, regarding the viscosity of the oil, that greatly different types of No. 6 oil (different in being thinner or thicker at the same temperature) may be delivered to a particular installation without causing a change in the oilburner's firing rate.

7. Adjustable air nozzle. This feature permits changing the shape of the fire so that it matches the width and length of the firebox. The adjustment is simple and involves only the relative position of the air nozzle to the atomizing cup. Where extraordinarily narrow or wide flames are required to fit highly unusual fireboxes, special parts are used to extend the range of the adjustable air nozzle beyond either the wide-flame or narrow-flame end of the normal range.

8. Twin ignition systems are standard for all automatic models rated for over 25 gph. These burners have two gas-electric ignition systems, each one complete and independent of the other. This twin-ignition feature provides ruggedness of operation, and oilburner dependability, which can be gained in no other way.

Two-hole Hinge used with No. 5 Oil

Diag. 2 indicates the use of the two pipe connections of the two-hole hinge model Superior burner, which is the model used for No. 5 fueloil. The lower "hole" or pipe connection simply is the suction-line connection of the burner; the upper "hole" or pipe connection is simply the return-line connection of the burner. The line labelled "Discharge to Burner" runs, of course, to the burner's atomizing cup.

Now although this fully automatic burner for No. 5 oil has a two-hole hinge (not the four-hole hinge used for No. 6 oil models), it has all the advantages of a dual fueloil pump, which will be covered presently. Also, it has all the advantages of the Superior-Combustion "Constant Oil Rate Control."

Diags. 3, 4, and 5, studied in conjunction with each other, tell the complete story of the four-hole hinge, used on the No. 6 oil models of the Superior rotary burner, and also tell the complete stories (which apply to models for No. 5 oil, as well as mode

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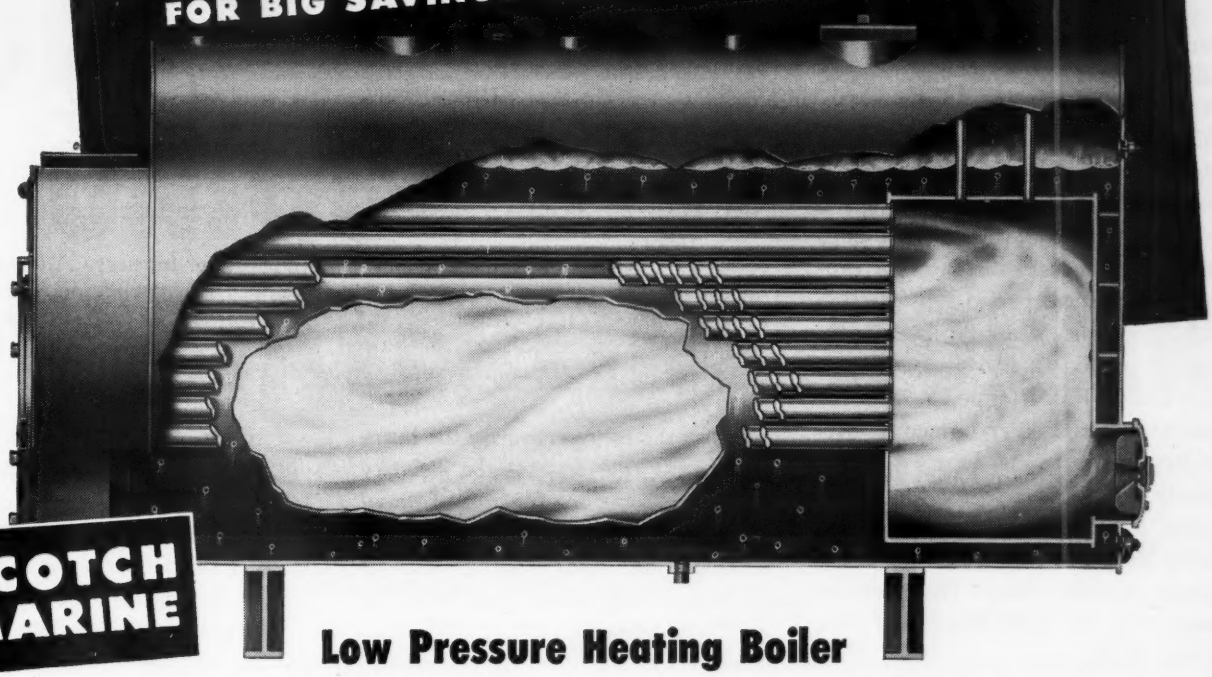

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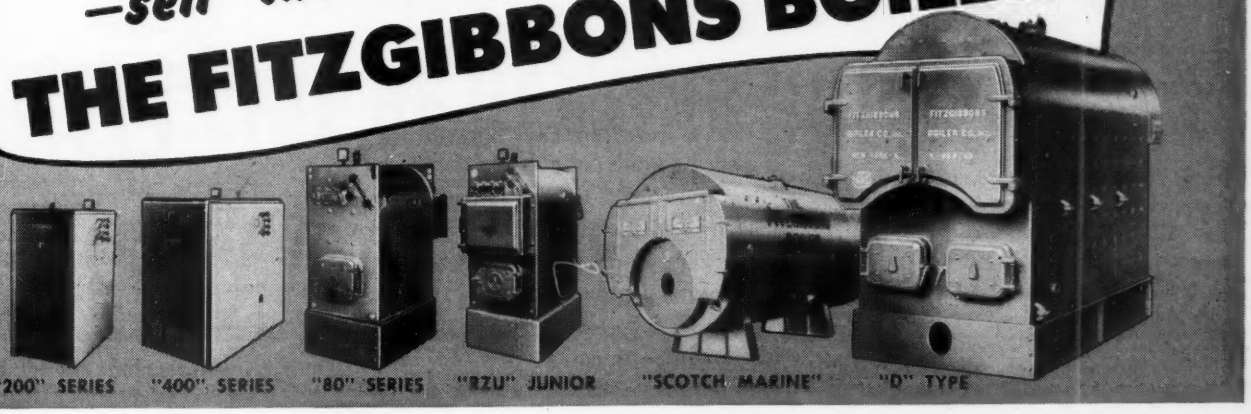


"200" SERIES "400" SERIES "80" SERIES "RZU" JUNIOR "SCOTCH MARINE" "D" TYPE

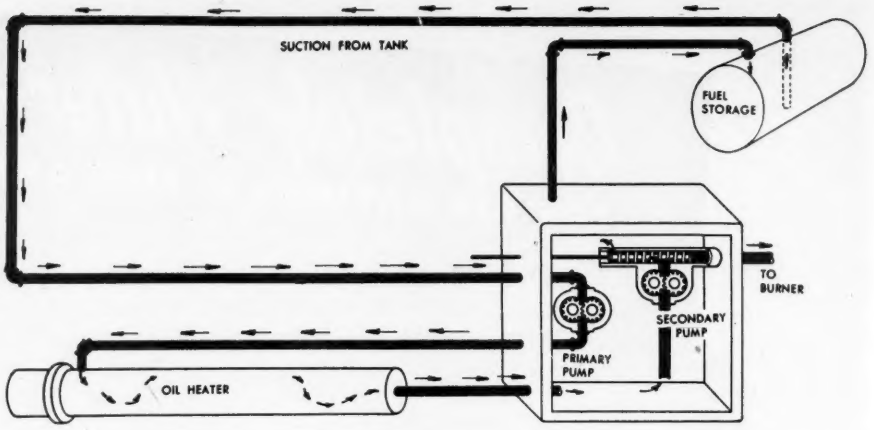
for No. 6 oil) of the ideas behind the dual pumps, and the Superior-Combustion "Constant Oil Rate Control."

On the side of the Superior rotary burner is a reservoir which remains full of fueloil. Because of its close proximity to the boiler, the fueloil in this reservoir usually remains fairly warm even at the end of a prolonged "off" period. Thus warm oil is stored in this reservoir and helps the pumps and the oilburner start after a prolonged shutdown period.

Within the reservoir and submerged in oil are two fueloil pumps (see Diag. 4), one termed a "primary pump" and the other termed a "secondary pump." As Diag. 4 shows clearly, the input side (or top of the pump in Diag. 4) of the primary pump simply is connected to the oilburner suction line. The primary pump thus draws oil from the fueloil storage tank.

All the oil from the primary pump flows, as Diag. 4 shows, to an oil heater. This is an under-the-waterline oil heater located at the side of a steam boiler, or a steam-type fueloil heater. Also, this is the heater which raises the temperature of the fueloil to the range of 135° to 185°.

Follow the output line of the oil heater in Diag. 4, and you can see that the oil pumped by the primary pump and sent through the heater returns to the oil reservoir on the burner. Using this system, the primary pump serves the one function of drawing oil from the tank, through the suction line, and sending this oil through a large heater that heats the oil to the range of 135° to 185°, then sending this hot oil to the reservoir.



Diag. 4—*Fueloil circuit of No. 6 oil models, Superior burners. All the oil from the primary pump goes to a steam-type or under-the-waterline oil heater, which heats the oil to the range of 135° to 185°. The hot oil from the heater then goes to the oil reservoir on the burner, in which the two pumps are located. That's why a four-hole hinge must be used.*

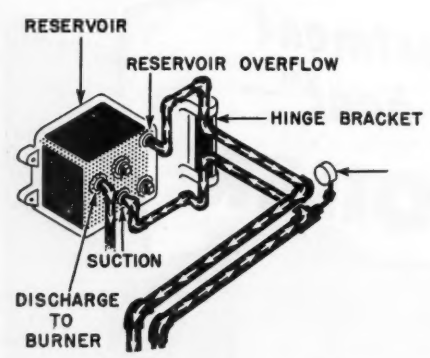
Plainly, the primary pump accounts for two of the hinge connections of a four-connection or four-hole hinge. One hinge connection is needed to connect the input side of the primary pump to the suction line. A second hinge connection is needed to connect the output side of the primary pump to the large oil heater usually located beside or above the boiler.

Now, a third hinge connection is needed to pipe the hot oil from the large oil heater back to the reservoir.

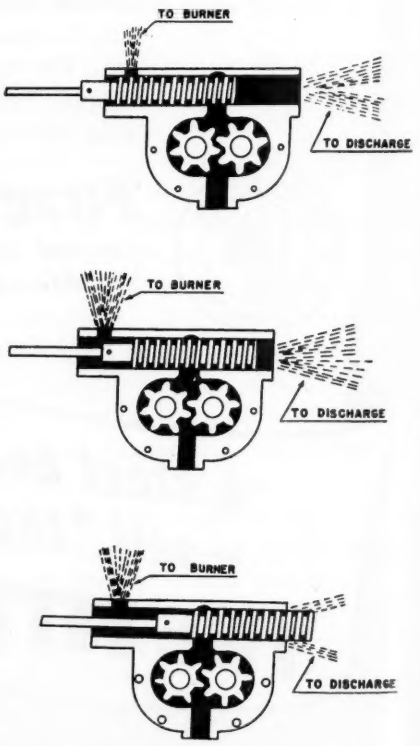
Here's where the fourth hinge connection comes in. Fueloil is returned to the tank all the while the burner runs, because the primary pump is oversize (it has higher gph capacity than the secondary pump) so that fueloil will be returned to the oil storage tank. If for example the primary pump draws oil from the suction line and tank at the rate of 120 gph, the burner may send to its atomizing cup for burning only 50 gph. In that case, oil would have to return to the fueloil storage tank at the rate of 70 gph. This is only an example; it does not give actual figures for any particular burner model. Now there must be a hinge connection, or port or hole, through which this 70 gph of fueloil can return from the reservoir to the outside oil tank, and that's where the fourth hinge connection comes in. Diag. 4 makes this clear, for it shows a return line from the top of the reservoir to the outside tank.

The reason for the four-hole hinge on the Superior rotary burner for

(*Please turn to page* 114)



Diag. 3—*Four-hole hinge bracket used for No. 6 oil models of Superior burners. The safety relief valve prevents excessive pressures at the output side of the primary pump in case of oil valves being turned off inadvertently. The burner has a built-in pressure relief valve to protect the secondary pump against excessive pressures.*



Diag. 5—*Secondary pump and "spiral gear" used to split the output-oil of the pump. The complex laws of viscous flow are said to be used in this splitter arrangement to maintain precise firing rates even though different No. 6 oil is used or temperature varies.*

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Design of the industrial Installation

Part XI—Function and Application of fueloil Preheaters

by
Kalman Steiner*

THERE ARE TWO general applications of preheating to fueloil: to No. 5 grade when it is used in gun type burners, usually of the air-atomizing type, and to No. 6 grade in all types of burners capable of handling it. It is the purpose of preheating to reduce the viscosity of the fueloil to a fluidity that will permit the method of atomization employed to break up the fuel properly.

Present Commercial Specifications (CS12-48) permit a maximum viscosity on No. 5 grade of 40 sec. Saybolt Furol at 122° F. The conversion from Furol at 122° F. to Universal at 100° F. depends somewhat upon the particular oil involved, but a safe approximation is 1 to 20, so that the permissible maximum viscosity on No. 5 grade might be stated as about 800 sec. saybolt Universal at 100° F. As a practical matter, few if any oil companies try to sell a No. 5 even approaching that viscosity; the usual range of maximum values is between 300 and 400 sec.

*C. Hoffberger Co., Baltimore, Md.

Most horizontal rotary burners with capacities upward of about 7 gph will have no trouble in atomizing such a fuel. Air atomizing burners, however, in capacities up to about 60 gph, can handle only preheated No. 5. Some dealers have a policy of installing preheaters with horizontal rotaries on No. 5 oil, especially if the viscosity runs upward of 400 sec. No. 6 oil, of course, requires preheating under any circumstances. The two burner types most frequently encountered on No. 6 oil are the horizontal rotary and the mechanical pressure atomizer.

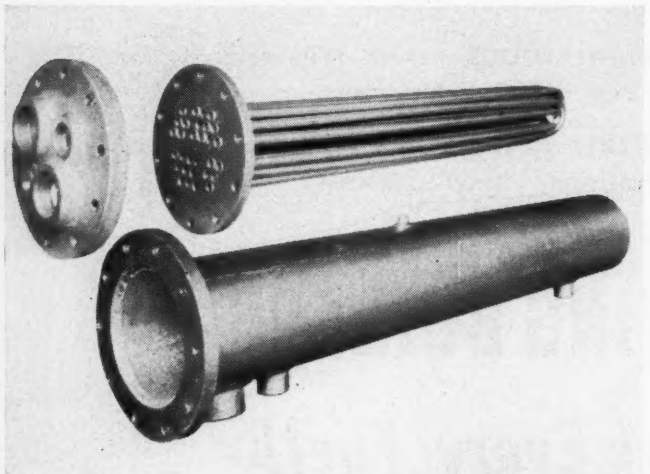
Three heating media are used for preheating fueloil: electricity, hot water, and steam. The last named medium can be low pressure, in some cases, and high pressure in others. In usual practice, electricity is used only to furnish enough warm oil to start up a cold boiler. As soon as boiler water starts circulating through below-the-waterline preheaters, or steam through steam-to-oil heaters, the oil temperature causes the electric heater to cut itself off. However, in gun burners requiring only a moderate amount of preheat in order to burn No. 5 grade, the installation may have only an electric heater.

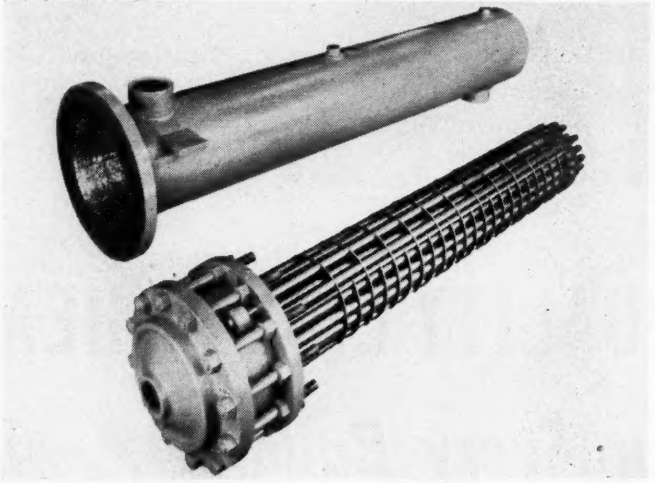
Electric Preheating

The unit of electric energy, the kw. hr., is equivalent to 3,415 Btu. In an electric heater, complete conversion of electricity to heat may be considered to occur. For design purposes, the weight of a gallon of heavy fuel oil is taken at 8 lb., and the specific heat at 0.5. The latter is the amount of heat in Btu required to raise the temperature of 1 lb. through 1 deg. F. Both these factors allow ample factor of safety in design. It follows, then, that to raise the temperature of 1 gal. oil through 1 deg. F. requires 4 Btu.

Hence to design an electric heater, we arrive at the required capacity by dividing 3415 into four times the product of gal. per hr. and temperature rise. Thus, to heat 15 gph through a 100 deg. temperature rise requires: $4 \times 15 \times 100/3415 = 0.175$ kw., or 175 watts. Or, again, to heat 80 gph through a 60 deg. rise requires: $4 \times 80 \times 60/3415 = 5.6$ kw. In these two cases respectively, the manufacturer would select heating elements rated 200 watts and 6 kw.

Electric heating elements are made in various forms and shape, but all are manufactured in a manner suitable for





Left: *Oil heating element and oil chamber in a Paracoil U-tube type oil heater for below-the-water line service. In this heater oil passes through the tubes.*

Right: *Shell and tube bundle assembly in a Paracoil tubular type fueloil heater for steam service. In this heater oil passes through baffles in the shell, steam through the tubes.*

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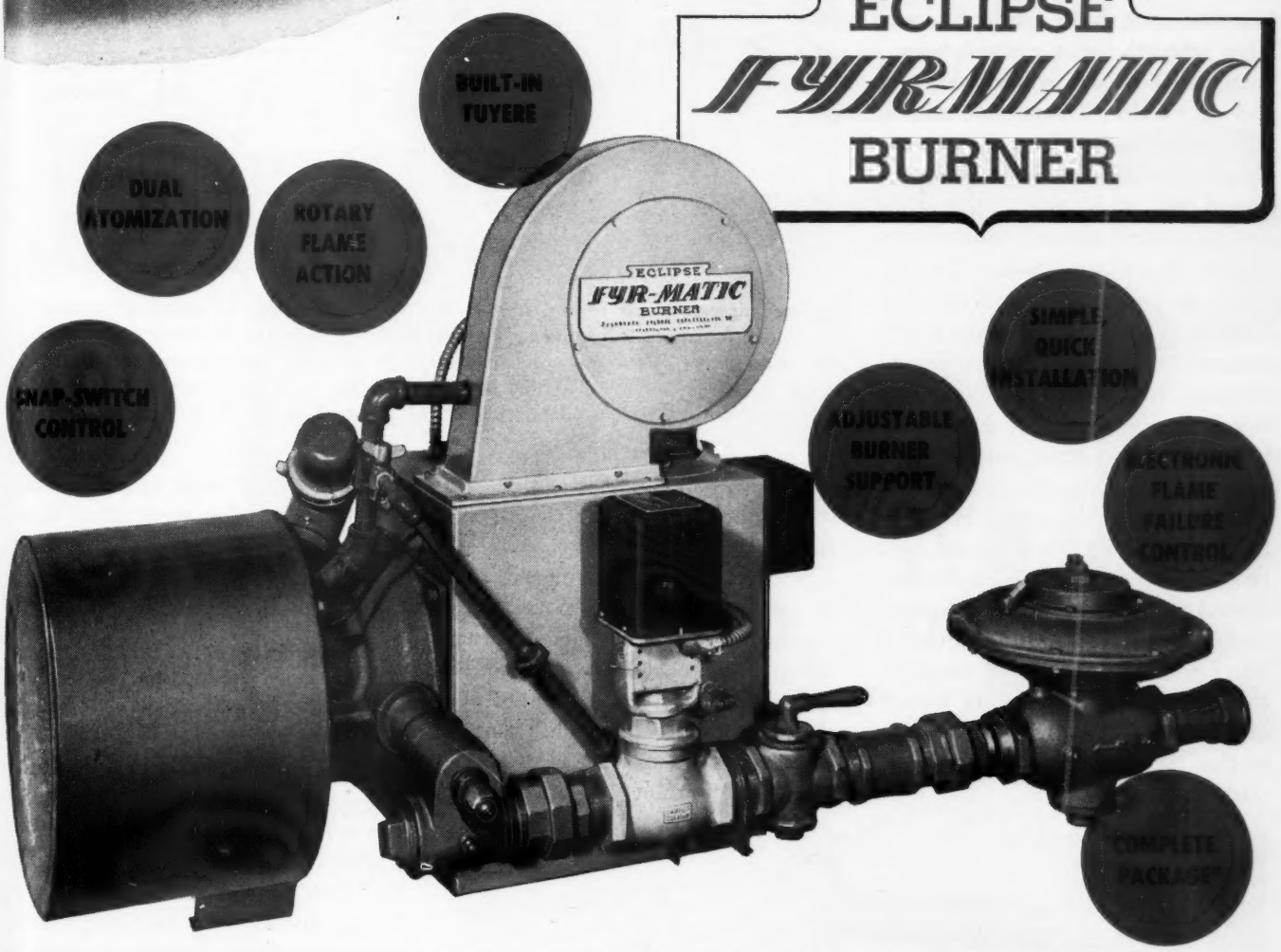

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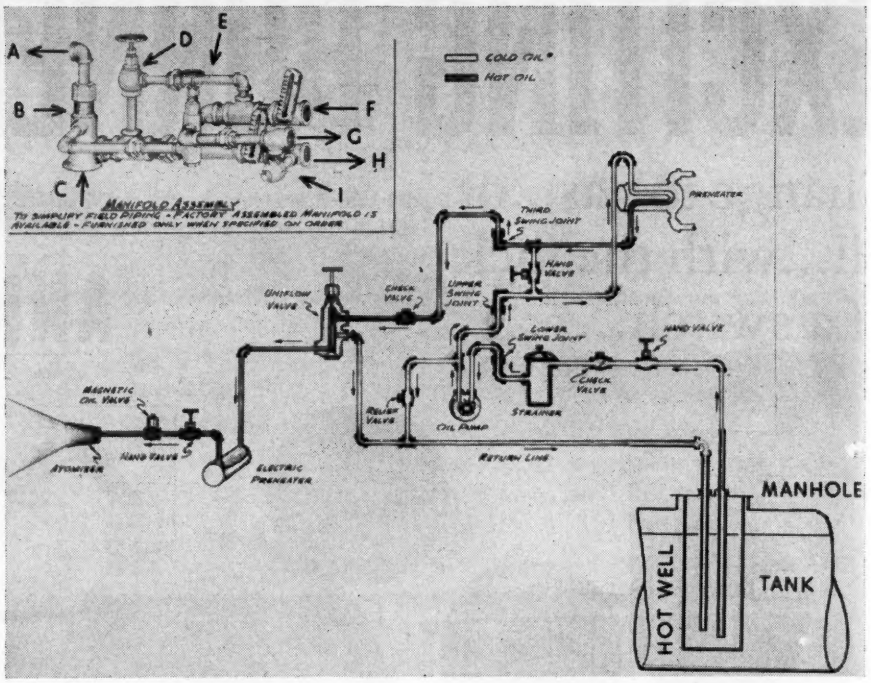
being immersed directly into the liquid body or into a sheath surrounded by the liquid. The advantage of the latter arrangement of course is the ability to withdraw a defective element without draining oil from the heater. The surface of a heating element must be adequate to hold the heat flow rate, in btu per sq. in. per min., below the safe operating maximum, as established by Underwriter's and other codes. The purpose of this regulation is to avoid excessive metal temperatures and thus prevent formation of coke, which might result if in localized areas the oil temperature reached the cracking point of the oil.

Electric heater thermostats take the form of a bulb immersed in the liquid contained within the heater tank, resembling hot water controls. The switching element may be directly attached to the thermal element, and generally is, or may be at a remote point, with capillary tubing between. Small gun burners working on preheated No. 5 usually need no further control mechanism, but large burners using No. 6 require a dual circuit—one for controlling the oil temperature, and one to lock out the burner circuit until the oil temperature reaches the point for safe ignition or starting.



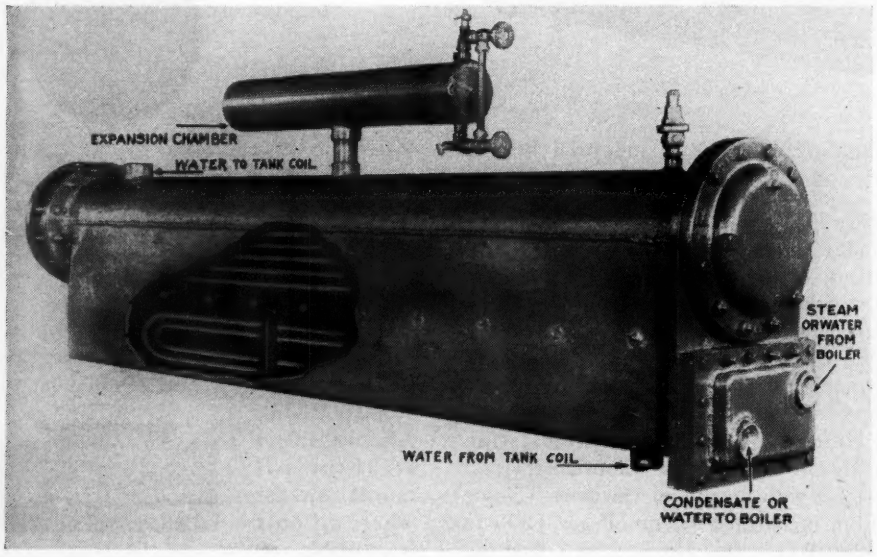
Typical piping circuit *for oil preheating, with details of the manifold assembly shown in the upper left-hand part of the drawing. Keys to the letters identifying the components of the manifold assembly: A. goes to electric preheater; B. third swing joint assembly; C. from pump discharge; D. angle valve; E. Uniflow valve assembly; F. from indirect heater; G. return to tank; H. to indirect heater; I. relief valve.*

Hot Water—Oil Heaters

All installations of commercial oilburners using No. 6 fueloil, on heating boilers, should be equipped with an oil heater using boiler water as heating medium. This applies to steam boilers and hot water boilers. The heater should preheat the entire discharge of the oil pump, which usually has a capacity somewhat in excess of the actual burning capacity of the burner—perhaps twice as much. The surplus warm oil is recirculated back to the storage tank.

To supply the boiler water to the oil heater, there should be a tapped opening, usually 2 in. pipe size, a few inches below the normal water line (on steam boilers, or either at the same level or between that level and the top of boiler, on hot water boilers). In the supply connection between boiler and heater there must be a gate valve and a union—the valve to permit opening the union without having first to drain the boiler. This valve also serves as a flow controller. After the heater is in service, the valve can be so set as to regulate the amount of boiler water circulating, and therefore, the maximum oil temperature.

From the heater, a similar line returns the boiler water to the boiler. Again a union and valve will be needed, to permit disconnecting the heater without interfering with the normal usage of the boiler. The return connection may be a tapping in the boiler, or a tee into the main boiler return line. On steam boilers, it is well to return directly into the boiler, independently of the condensate return, especially if a condensate pump is



Wa-Tu-Bo *safety oil heaters prevent oil from entering boiler water in case of tube failure. Boiler water circulates through a copper tube element placed inside a shell filled with water. The copper tubes heat the water, which in turn heats tubes through which oil is pumped to the burner.*

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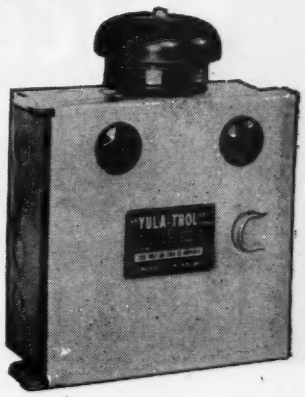

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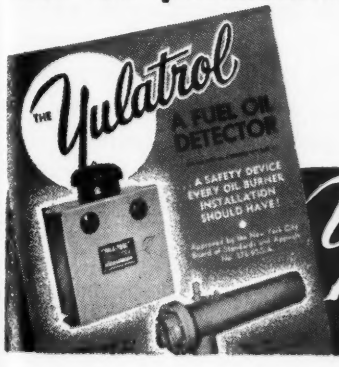

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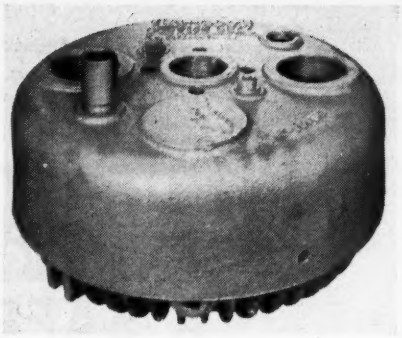
used. But in any case, should the return line be used also for returning the circulating boiler water from the oil heater, there should be a check valve between the heater and the return main. On hot-water boilers, with a central circulating pump, the heater return can be connected directly into the pump suction, which is drawing water from the boiler, through the heating system, back to the boiler.

. . . . Design of the industrial Installation

The dealer should be careful to specify a heater that conforms to the requirements of boiler insurance companies. The tubes of such a heater must be constructed of a corrosion resistant alloy. It is apparent that a leak in such a tube will permit fueloil to enter the boiler. Heater manufacturers have developed fabrication specifications that comply with insurance company requirements. Even so, some states have regulations that may require the use of a double heat exchange, the first heater to use boiler water on one side and circulating water on the other; the second heater to use the circulating water on one side and fueloil on the other. Hence a leak in the fueloil heater will not allow oil to enter the boiler. The dealer must ascertain for himself what local or state regulations apply to such installations.



Paracoil *tank suction bell.*

Recently alarm devices have been developed to give warning if a leak in the preheater permits fueloil to enter into and mingle with the boiler water. A typical alarm of this type works on the principle of electrical conductivity. Water has a relatively high conductivity, and will easily complete an electrical circuit between two electrodes. But fueloil has a very low conductivity, and so if it contaminates the circuit, the current flow ceases, dropping out a relay which closes the alarm circuit.

Steam--Oil Heaters

The usual application of steam as the preheating medium occurs in the high pressure plant, where steam is used for processes such as laundering, dry cleaning, milk and cream bottling, garment pressing, food cooking, etc. However, in large heating plants, such as in office buildings, hotels and major sized apartments, there may be the type of continuous operation that permits using low pressure steam as heating medium. But in the average moderate sized heating plant the demand for steam is not sufficiently continuous to assure a constant supply to the preheater, and so the heater is connected below the boiler water line, as described above.

The customary way of controlling oil temperature in a steam-oil heater is a thermostatic steam valve, the tem-

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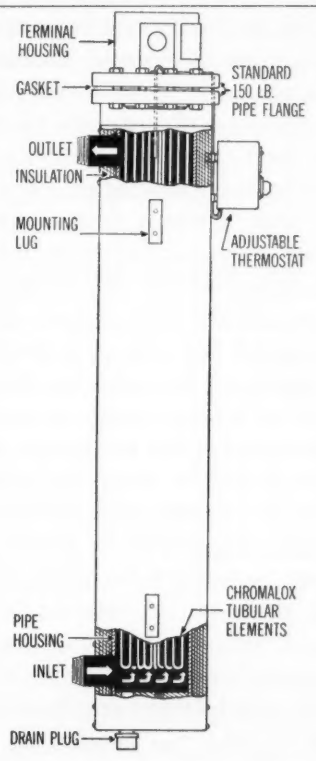
perature bulb being immersed in the oil stream leaving the heater, and the valve being placed in the steam supply line to the heater. A three-valve by-pass around the thermostatic valve is always advisable. Then, since the temperature bulb fits into a well from which it is separable without interrupting oil flow, the entire thermostatic valve assembly can be removed for servicing without shutting down.

As in the case of the below-the-water line heater, a steam-oil heater should have sufficient capacity to heat the entire pump discharge, thereby providing a surplus of warm oil to be recirculated back to the storage tank. Some installations are made with the heater in the suction line. The method of handling the recirculated oil at the tank is described below. Every heater using steam as heating medium requires a combination float-and-thermostatic trap to allow air and condensate to leave the heater but holding back steam. In large installations this trap should also be by-passed to permit servicing it without shutting down the burner.

With hot water as the heating medium, the usual heater arrangement has the oil flowing through a series of tubes and the hot water around the



Cut-a-way *of Chromalox oil preheater, equipped with adjustable thermostat.*

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tubes, inside the heater shell. The tubes may be U-shaped, or straight. With U-tubes, the return bend end of the tubes is free to move with expansion and contraction, and the heater has but one head. With straight tubes, each end has a head.

Heater heads contain a tube sheet and a series of baffles to direct the oil from one pass to the next. Since oil tends to stratify while passing through heater tubes, the outer layers will heat more quickly than the core. Hence by creating turbulence at the end of each pass, as of course occurs in the baffled chamber within the head, the use of multiple passes tends to effect more uniform heating. Multiple passes introduce resistance to flow, however, and so the designer must balance allowable pressure drop against heating effectiveness to produce a heater with guaranteed capacity and minimum pressure drop.

With steam as heating medium, the construction may be identical to that just described, or may take the form of concentric tubes immersed in oil, the steam entering the inner tube, flowing down the length of the heater in one direction to the open tube end that leads steam and condensate into the closed end of the surrounding tube. This creates a reversal of direction, and causes steam and condensate to return toward the original end, but the outer tubes terminate in a tube sheet having a separate chamber that connects to the condensate outlet, which must be trapped as above mentioned. Meanwhile, oil enters one end of the shell and is directed by baffles through a series of passes across the tube, producing constant turbulence and bringing the oil temperature up uniformly, without stratification.

Piping Circuits

Starting at the tank, there should be a hot well, which is a steel cylinder, the diameter just enough smaller than the throat of a manhole to permit its passing through. At the upper end, this well is attached to the manhole cover; the lower end remains open, at a point about four inches above the tank bottom. This manhole is in addition to the access manhole, which will be needed in case inspection of or attention to the tank interior become necessary. A small vent hole in the cylinder wall, just under the manhole cover, permits vapors to escape into the main tank space. The suction stub descends from a double tapped bushing screwed into a flange or coupling welded into the manhole cover, and the warm return oil that recirculates from the main preheater is discharged into the hot well by means of another flange or coupling connection. Hence the burner pump takes its suction from the confined warm oil retained within the hot well. The oil consumed by the burner is of course replenished by additional oil from the main tank entering the bottom of the hot well. The suction stub entry is a few inches above the bottom of the cylinder that forms the well.

The suction line conducts oil from the hot well, through check valve, gate valve and strainer into the pump. The

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. . . suitable for both suction side and pressure side hook-up

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gph rate. Incidentally, the secondary pump stands little chance of taking in air, even on an installation having a slight suction line air leak. The secondary pump is submerged in the oil that fills the reservoir. The reservoir serves as an air-separation chamber. Any air that comes into the reservoir because of a slight suction line leak will immediately rise to the top of the reservoir and find its way to the return line connection, then will go through the return line to the fueloil storage tank. As long as the primary pump brings in enough fueloil to equal the firing rate of the burner (and even if air comes with this oil because of a suction line air leak), the secondary pump will receive nothing but 100% oil. Because the primary pump is oversize as far as the gph rate of the burner is concerned, one can go so far as to say that it takes a pretty nasty air leak (one large enough to cause no oil to return to the outside tank) to affect the operation of the secondary pump.

All this sums up to the fact that the secondary pump can be regarded as having a constant output under all conditions that permit the burner to operate at all. The secondary-pump output will be constant despite great changes in the suction line vacuum, and despite the effects of not-so-slight air leaks in the suction line. Of tremendous importance, the secondary-pump output will be virtually the same whether this pump receives oil which is relatively cold and therefore thick, or relatively hot and thin.

Adjusting the gph Rate

Now to study the output circuit of the secondary pump. A "splitter arrangement" is used. Consider that on the basis explained above, the secondary pump under all conditions gives out precisely 60 gph; you might say within plus-or-minus a few per cent, if you want to qualify that, but then on the basis of Superior-Combustion beliefs you might stop qualifying and call the plus-and-minus negligible. Assume, then, that the secondary pump output is precisely 60 gph under all conditions.

The details of the secondary pump output circuit are shown in both Diag.

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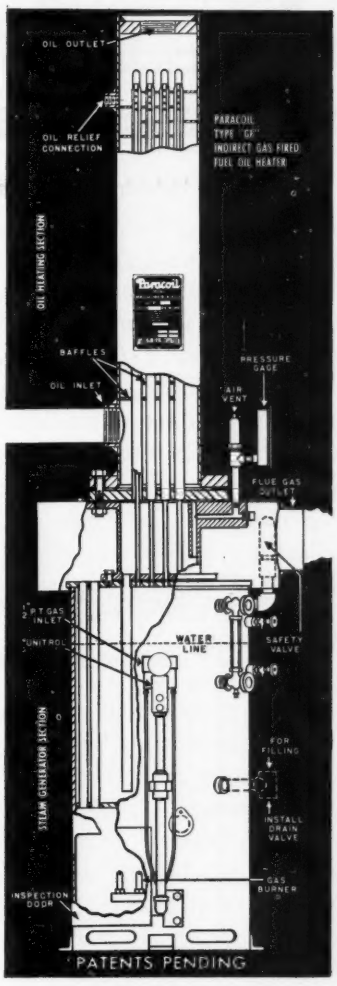

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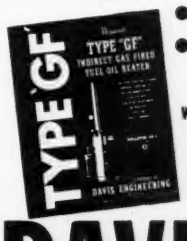

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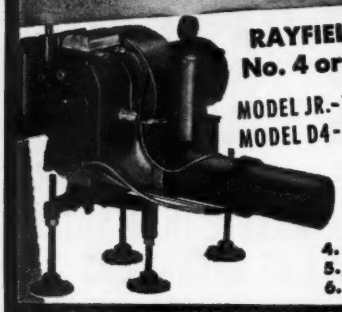

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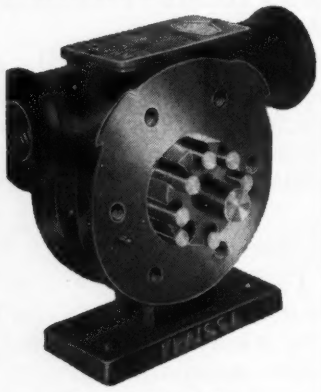

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Roller tolerances permit handling extraneous matter that would jam other mechanisms. Good suction characteristics. Capacities 60-600 GPH; pressures to 100 psi. Ask for Bulletin A-1330.

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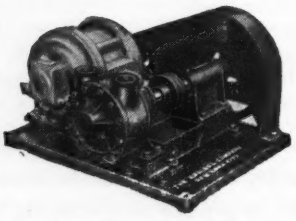

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4 and Diag. 5. All of the oil from the secondary pump goes into a passage which is occupied by a metal screw, resembling part of a worm-gear-drive arrangement. Superior-Combustion engineers call this part, in fact, a spiral gear. It does not rotate, however, but merely slides back and forth in its chamber, as Diag. 5 shows, when a lever is moved to change the gph rate of the flame.

Shifting the position of the spiral gear (see Diag. 5) constitutes a simple adjustment, a gph rate adjustment. The uppermost drawing in Diag. 5 shows most the oil from the secondary pump going "to discharge" (back to the reservoir on the burner) and little oil going "to burner" (to the atomizing cup, to be burned) because the position of the spiral gear causes such proportioning of the fueloil coming out of the secondary pump at a constant gph rate.

We are assuming the output of the secondary pump is precisely 60 gph at all times. In the uppermost drawing of Diag. 5, 30% of the oil may go to the cup, and 70% may go back to the reservoir. This is important: These percentages will be the same whether the fueloil is cold and thick or hot and thin. That's the basis of the "splitter arrangement." Of course, with the oil cold and thick the pressure the secondary pump develops, in forcing all its output-oil through the spiral gear, will be higher than if the oil is hot and thin.

The center drawing in Diag. 5 suggests a 50-50 splitting. With the pump emitting precisely 60 gph at all times, as we are assuming, the gph firing rate would be 30 gph, and oil would be returned to the reservoir at the rate of 30 gph.

The lowest drawing in Diag. 5 suggests precisely the reverse of the uppermost drawing. Here, the firing rate might equal 70% of the output of the secondary pump, while 30% of the output of this pump represents the rate at which oil flows from the spiral gear to the reservoir.

Superior-Combustion engineers say:

1. They believe the suction-line oil, flowing to the primary pump that develops the suction-line vacuum, should not become hotter than, say, about 140° or 150°.

2. However, they find that best operation of certain installations using certain difficult-to-burn oils, being delivered in increasing quantities these days, depends on heating greatly the oil that flows to the atomizing cup of their burner. They want the latitude of being able to heat oils to 185° where this proves best, just as they want the latitude the belt drive gives them in permitting them to use cup speeds above 4,000 rpm.

3. Therefore: (a) They reason the suction-line oil must not be too hot; and (b) The oil that goes to the atomizing cup either often or usually must be much hotter than the suction-line oil.

4. As their next step of reasoning, they find that the four-hole hinge is necessary to permit the pattern of oil heating and burner operation indicated in Diag. 4. This permits arranging to have the suction-line oil at any desired moderately-warm temperature while the oil that flows to the atomizing cup is a great deal hotter.

PREFERRED Anti-Syphon Valves

PR-194

APPROVED BY

UNDERWRITERS' LABORATORIES, INC.

Permits pumping of oil but closes to prevent syphoning in case of suction line break.

FOR OILS UP TO No. 5
Valves C5 and C10 are available in ⅜" and ½" sizes.

FOR OILS UP TO AND INCLUDING No. 5
Valves B5 and B10 are available in ¾" and 1" sizes. (1" size is built up from ¾" size with fittings.)

FOR OILS UP TO AND INCLUDING No. 6
Valve A is available in 1¼", 1½" and 2" sizes for 5 or 10-foot head pressures.

You can be sure of the best when you order from Preferred, the oldest and the largest manufacturer of anti-syphon valves.

PREFERRED UTILITIES MFG. CORP.
1860 BROADWAY, NEW YORK 23, N.Y.

Preferred Utilities for Results

wheelco instrumentality

LOW-COST BOILER INSURANCE

wheelco flame-otrol

For Improved Instrumentation—get the complete automatic combustion safeguard. It's a simple and versatile flame detector to provide Safe Start—Safe Operation—Safe Shut-off on all types of oil and gas burners. Approved by Associated Factory Mutual Laboratories and Underwriters' Laboratories.

Get complete details. Write for FLAME-OTROL BULLETIN F-3, Wheelco Instruments Company, 868 W. Harrison Street, Chicago 7, Illinois.

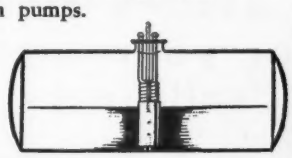
wheelco *electronic controls*

Solve Bulk Tank Preheating!!!

REMPE
"Hot-Spot" PREHEATER

Heats heavy oils in bulk storage to proper flow temperature before they enter the suction line —takes load off suction pumps.

Heating medium — steam or hot water. Construction — all steel — connections for any diameter tank.

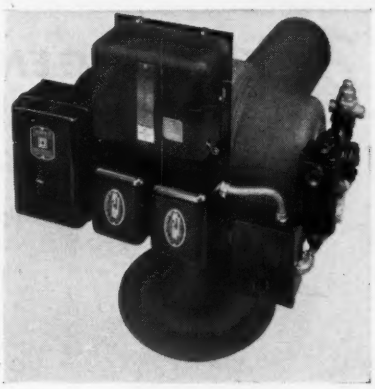


Write for bulletin

REMPE COMPANY
336 N. SACRAMENTO BLVD. CHICAGO 12, ILL.

Weatherall AUTOMATIC OIL BURNERS

COMMERCIAL • INDUSTRIAL



Capacities 10-35 G.P.H.
#2 or #3 Fuel Oil

FEATURES:

- Safer and Smoother Operation
- Twin Ignition
- Electronic Flame Control
- Low Fire Start Delayed High Fire

Also Package Type Warm Air Units
Direct Fired—Up to 5,000,000 B.T.U.

Weatherall Engineers

387 CHARLES STREET
PROVIDENCE 4, R. I.

MANUFACTURERS OF QUALITY HEATING PRODUCTS SINCE 1928

Oil Burners • Air Conditioners • Boiler Burner Units

FOR DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATIONS

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Study of Bunker C Trends undertaken by NPC

A COMMITTEE to study certain aspects of the Bunker C fueloil situation has been named by the National Petroleum Council's Chairman Walter S. Hallanan. As requested by the Deputy Petroleum Administrator the study will:

Summarize the trends of domestic manufacturing, importation and individual types of usage of Bunker C fueloil, commencing with 1946 and continuing through 1952;

Advise as to the reasons of dimunition of the yield of Bunker C fueloil per barrel of crude run since 1946, including technological changes and the net effect that has resulted in per barrel yields of petroleum products.

The Deputy Administrator cited the effect of adequate supplies of Bunker C on national defense and remarked that in recent months its supply in coastal areas of the United States has been relatively short. This was due partly to cessation of refining operations in Iran and partly to "breaking out" of reserve ships for international trade. At the same time, relative surpluses have existed in other interior areas.

Refinery production of Bunker C fueloil in recent years has decreased in this country as a percentage of crude oil run and domestic supplies have been augmented by imports. At the same time demand has diminished somewhat for technological reasons, such as less of it used for fueling oil-fired steam locomotives and fluctuations for demand for power plant use. Still other uses, particularly for the bunkering of ships, including vessels fueled with Navy Special fueloil, seem to fluctuate with the international situation.

PAD's best sources indicate that the supply situation surrounding Bunker C will continue to be bothersome in the coastal areas during the winter of 1952 and perhaps thereafter. As a result, the Deputy Administrator requested the study since threatened shortages or supply difficulties of Bunker C fueloil are important to so many Government agencies and industries.

Members of the committee on Bunker C fuel supply, headed by B. Brewster Jennings, are: Robert O. Anderson, Hines H. Baker, T. H. Barton, Reid Brazell, Robert H. Colley, Earle M. Craig, J. Frank Drake, Paul Endacott, R. G. Follis, Clyde T. Foster, John Harper, Fred W. Herligy, Eugene Holman, B. L. Majewski, L. F. McCollum, S. B. Mosher, Glenn E. Nielson, J. L. Nolan, J. R. Parten, Walter R. Reitz, R. L. Tollett, Robert E. Wilson and C. H. Wright.

❖

Petro sells burner and fueloil marketing Divisions

A JOINT ANNOUNCEMENT on May 5 by Kenneth G. MacCart, president of Petroleum Heat & Power Co., Stamford, Conn., and William J. O'Neil, chiarman of the board, Iron Fireman Mfg. Co., Cleveland, Ohio, reported that Iron Fireman has purchased the Petro oilburner business. The entire line of Petro domestic, commercial and industrial oilburners and units will be manufactured in Iron Fire-

INSTALL A GENERAL FUEL OIL FILTER ON EVERY HEATING SYSTEM YOU SERVICE

Because: GENERALS assure clean, safe fuel oils for your customers—stop costly "call-backs" for you

1. Positive absorption with GF's double filter element. Finest felt cartridge removes the finest dirt particles. Inner wire mesh strainer prevents collapse, backs up cartridge.
2. Two-minute felt cartridge replacements mean easy service revenue for you for years to come.
3. Your customers will WANT GENERAL FILTERS and the clog-free protection they offer the year 'round by trapping impurities before they reach burner nozzles.
4. There's a GENERAL FILTER model to fit every need . . . small or large . . . home, business, trailer, etc. All that's needed is a wrench and a few minutes' work.

Remember: . . . a ⅛ inch layer of soot raises heating costs up to 25%! CLEAN RIGHT SOOT REMOVER cleans any system quickly, safely — leaves no residue.

GENERAL FILTERS INCORPORATED
GENERAL FUEL OIL FILTERS
12890 Westwood Ave. Detroit 23, Michigan
CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVE., TORONTO 13, ONTARIO

IT'S ALWAYS EASIER TO SELL
A KNOWN and RESPECTED BRAND

Easy to Buy...

Easiest to Service too

SILENT GLOW

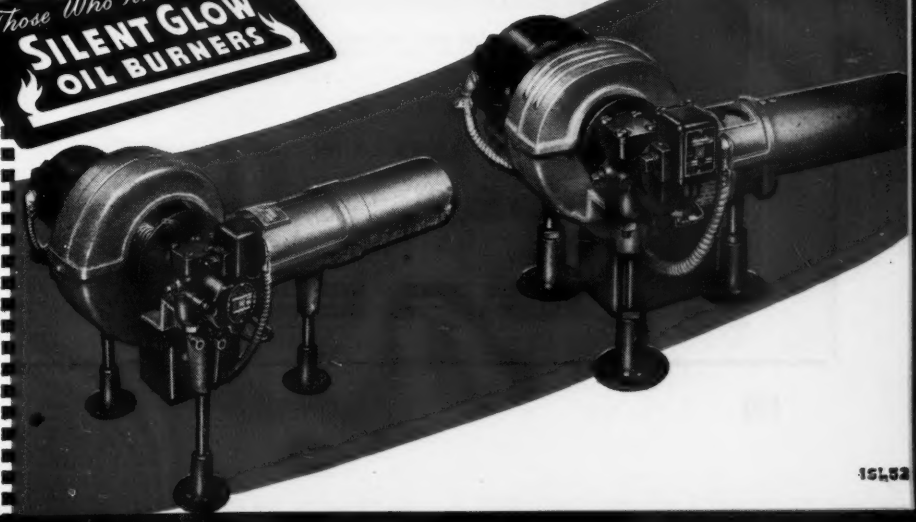
...A BURNER FOR EVERY TYPE & SIZE OF HEATING PLANT

Silent Glow brings you *every* advantage of long established consumer acceptance. Plus excellent engineering... extra quality in every detail of construction... a "balanced" line for every type of installation... competitive values it is EASIER for your prospects to buy.

Silent Glow features and aggressive merchandising support equip you to sell NOW. Customer satisfaction is safeguarded by hundreds of thousands of successful installations. That is why, "Men who know always choose SILENT GLOW."

FOR FULL INFORMATION SEND ▼ TODAY

Those Who Know Choose
SILENT GLOW OIL BURNERS



THE SILENT GLOW OIL BURNER CORP.

850 Windsor Street, Hartford 5, Connecticut
1500 So. Western Ave., Chicago 8, Illinois

...us the complete facts about Silent Glow Oil Burners including ... and your money-back guarantee.

...e: _____

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_____ State: _____

15L52

man's Cleveland plant, with Petro headquarters moved to Cleveland and becoming the Petro Division of Iron Fireman Mfg. Co. on June 1.

J. R. Crews has been appointed sales manager of the Iron Fireman Petro Division, in charge of Petro field sales operations under C. T. Burg, Iron Fireman vice-president in charge of sales. Crews has been active in the Petro organization for many years, first in field sales in the midwest, then in retail sales in Chicago and most recently as supervisor of Petro retail branch sales. The Petro sales organization will remain entirely separate from Iron Fireman, with Petro equipment sold through jobbers handling Petro and through its retail branches. No Petro equipment will be sold through Iron Fireman dealers or branches and no Iron Fireman equipment will move through the Petro sales organization.

At the same time, the *Journal of Commerce* reported the sale of Petro assets of its oilburner manufacturing and heating oil marketing division for $8 million to the Pittston Co. Pittston had agreed to honor the already consummated sale of the burner manufacturing division to Iron Fireman. Pittston thus is retaining Petro's fuel-oil marketing division and will operate it as a separate unit on the East Coast and in Chicago.

Mr. MacCart explained that during recent years Petro has been emphasizing refining and production of crude oil and gas. The funds released through the sale of the oilburner business are to be used to expand the production and refining division of the company.

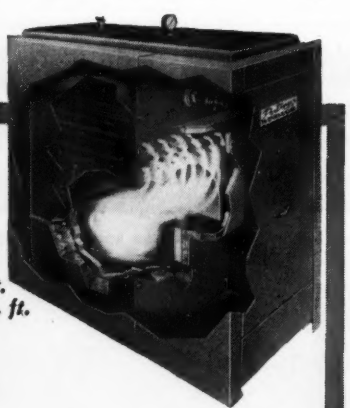
Mr. O'Neill, acknowledging the reputation for the quality of its equipment and service to its customers established by Petro since its founding in 1903, said, "We will continue these policies which have proved so successful and are making no changes in Petro marketing plans. All present Petro field sales and engineering personnel will continue in our Petro Division and many members of the Petro operating staff will be transferred from Stamford to Cleveland. It is our intention to help Petro outlets in every way possible increase their sales volume and earnings and we will build all the equipment they can sell."

PROFIT-WISE heating contractors specify . . .

PORTMAR GAS OR OIL FIRED STEEL BOILERS

Meets every heating demand for steam or hot water

In-demand boilers that assure long range customer satisfaction, Portmar steel boilers operate at high heating efficiency—producing low cost heat and abundant clean hot water all year 'round. Priced "right" to meet a steadily growing market, contractors are discovering that Portmar boilers are *easier to install and amazingly trouble-free.*



WINDSOR STEEL BOILERS

horizontal tube series . . . with extended jackets

Steam: 320 to 3,000 sq. ft.
Hot Water: 510 to 4,800 sq. ft.

PORTMAR RESIDENTIAL STEEL BOILERS

vertical tube series . . . with flush or extended jackets

Steam: 320 to 1,100 sq. ft.
Hot Water: 510 to 1,760 sq. ft.

GUARANTEED PERFORMANCE ON EVERY JOB

- scientifically arranged heavy gauge steel, long life boiler tubes provides maximum heat transfer
- large furnace volume
- long gas travels permit complete absorbing of gases for high efficiency and economy
- attractively designed boiler jackets add beauty to basements
- large hot water tankless copper coil
- designed so that parts are easy to reach for proper cleaning
- tested with high hydrostatic pressure

Larger boilers made to order

Contact your jobber or write direct for literature and prices

"Engineered quality steel boilers for luxurious heating"

Portmar Boiler Company Inc.

193 SEVENTH STREET • BROOKLYN 15, N. Y.

RESIDENTIAL, COMMERCIAL, INDUSTRIAL WATER HEATERS AND HEATING BOILERS • PORTMAR STEEL BOILERS • ROTARY WALL FLAME BOILERS

Omaha market Report surveys home Heating

THE CURRENT MARKET REPORT compiled and published by *The Omaha World-Herald* contains a section that gives details of how homes are heated in the area. For 1952 it is shown that 39.4% of the homes are heated with gas, 31.5% by oil and 29.3% by coal. Comparative figures for previous years indicates that in 1949 the ratio was 19.1% for gas, 26.3% for oil and 55.0% for coal.

The number of homes surveyed each year has varied somewhat, but in general gasheating has shown the greatest growth during the four years, increasing some 16,000 to a total of 33,254. Oilheating has shown steady but moderate gains to 26,586, a jump of better than 2,500, while coal has shown a sharp drop from 49,995 to 24,729.

(*Continues on page 122*)

Save call-backs with TACO TEMPERING VALVES

because they . . .

✓ **S-T-R-E-T-C-H TANKLESS HEATER PERFORMANCE**

✓ **GUARD AGAINST EXCESSIVELY HOT WATER**

Install Taco Tempering Valves to avoid complaints of "the water's too hot" or "the tankless heater doesn't give enough hot water." You also prevent high temperature water in dishwashers from baking food on dishes.

MINIMUM SERVICE PROBLEMS

Over a 12-year period less than 3/10ths of 1% of Taco Tempering Valves sold have been returned for all reasons.

YOU ALSO GET THESE EXCLUSIVE FEATURES

Two unions. Hermetically sealed element that will not tire, fatigue or corrode, and that successfully avoids the use of bimetal, bellows or volatile liquids. One piece element easily replaced in minutes. Biltin check valve for equalizing pressure. No cold water slippage.

ADJUSTABLE AND NON-ADJUSTABLE

Supplied in ½" and ¾" sizes in both adjustable and non-adjustable models. Type "A" is adjustable from 120° to 160° F. Type "B" non-adjustable is factory set to deliver water at approximately 135°-145° F. Larger sizes, 1", 1½" and 2" are available in the type "T" which are adjustable from 130° to 200° F.

Taco

Better Heating-Better with Taco

TACO HEATERS, INCORPORATED, 137 SOUTH ST., PROVIDENCE 3, R. I.

The table contains details of the survey showing how homes are heated in Omaha in both number and per cent.

Per Cent

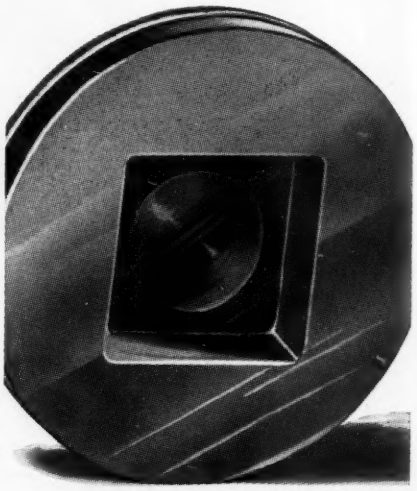
	1952	1951	1950	1949
Gas	39.4	35.6	28.2	19.1
Oil	31.5	29.3	26.8	26.3
Coal or Coke	29.3	35.1	45.0	55.0

Number of Homes

Gas	33,254	31,257	26,931	17,362
Oil	26,586	25,725	25,594	23,907
Coal or Coke	24,729	30,818	42,975	49,995
	84,569	87,800	95,500	91,264

Colored, plastic fill caps developed by Hollis Albert

LAST YEAR in the Useful Ideas Contest conducted by FUELOIL & OIL HEAT one of the employees of Hollis Albert, president of Operators Heat, Inc., Baltimore, Maryland, submitted a winning entry for a method of marking fueloil storage tank fill caps. He explained that during the previous winter some of the company drivers had delivered oil to the wrong home, particularly in groups of row-houses or other places where residences were grouped closely together. The "Idea" he reported that helped solve the problem, was to take a number of fill caps, stamp them with identifying initials and gradually replace all the fill caps that might cause this trouble.



Colorcap, *plastic fill cap, furnished with a Neoprene gasket and available in various colors. Each oil dealer who buys the caps is assigned his own color and the fill cap of each of his customers then can be identified easily.*

Thinking about the problem, Albert hit upon the idea of making fill caps out of plastic which could be produced in a variety of colors so that each company could have its own identifying tint. Investigating further, he talked over with a customer of his who manufactured canteen tops for the Army the idea of using the same plastic for the fill caps. The customer agreed to make them and let Albert promote their sale. He provided the know-how for moulding the plastic caps and after field-testing, they were found to be practical.

The caps are round, have standard threads and are fitted with a neoprene gasket. Albert reports they are unaffected by fueloil, kerosene, heat or cold. Advantages were found to be that the cost was considerably lower than conventional caps, identification was made positive by distinctive colors and, principally, plastics are plentiful, brass is scarce.

Albert has organized a company to sell the product and calls it Colorcap, the same as the trade name for the fill cap. He explains they will be distributed through regular trade channels with the following reservations:

INSIST UPON THESE

4 important features

IN THE OIL BURNER YOU SELL

★ *The Whirling Flame.* Extracts every bit of useful heat from every last drop of oil, assuring big savings on fuel bills!

★ *Unit Engineering.* Design and construction as an integral unit results in far greater heating efficiency.

★ *"Thermos Bottle" Insulation.* Radiation and heat loss are minimized throughout the non-heating season.

★ *Beautiful Cabinet.* Duotone baked enamel cabinet with chromium hardware will blend perfectly with the other surroundings.

The Bethlehem DYNATHERM

is Easier to Sell and Faster to Install!

MORE PROFIT FOR YOU!

★ FREE literature and newspaper mats available to all Dynatherm dealers.

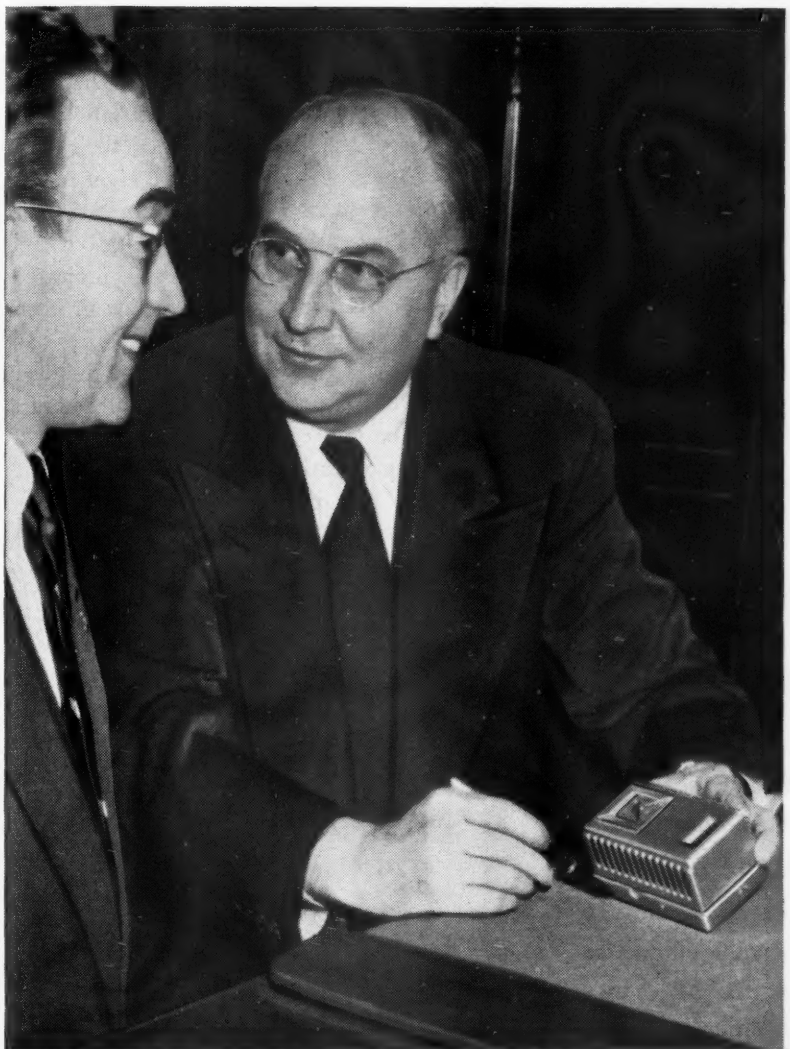
A few exclusive Bethlehem Dynatherm territory Franchises are still available. Wire or write immediately for full information.

BETHLEHEM FOUNDRY & MACHINE COMPANY

BETHLEHEM, PENNSYLVANIA

"Stiff price competition doesn't hurt our Chronotherm sales"

Here's a heating dealer from Boston who "bats" better than .500 on tough price jobs!



A. L. Dwelley, right, general manager of the Automatic Heating Corp., talking to Honeywell salesman John Donovan

"Just like everyone else, we're faced with a lot of stiff price competition these days.

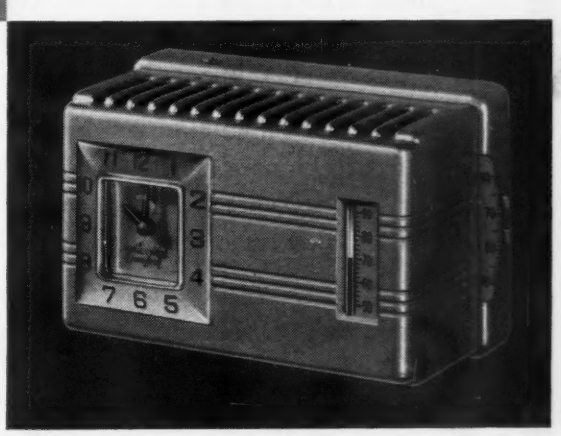
"But unlike a lot of heating dealers, I think we've hit upon a pretty good piece of sales strategy for getting around it.

"We simply quote our jobs based on the standard, *manually operated* Honeywell thermostat—but at the same time bring along a Chronotherm. We tell customers that for just a little extra money they can get *fully automatic* heating comfort for their homes. And you should see them sit up and take notice!

"Then we cover the wonderful automatic features of the product. We explain how—by fuel savings—they come out way ahead with a Chronotherm, in the long run.

"To date, our batting average on 'price jobs' has been better than .500. And with twenty-five salesmen out there pitching, this extra profit, over a year's time, comes to a substantial figure.

"Customers are always better satisfied, too, after living with a Chronotherm for a while. They're *happier* and that's the way we like to keep 'em."



Sell the famous Honeywell Chronotherm!

Always offer it as an alternate on every bid you make! Latest surveys show that 3 out of every 4 families with thermostats raise and lower temperature settings every day, *by hand.* This represents a big, potential market for dealers who sell the Chronotherm—because the Chronotherm *automatically* raises temperature in the morning, *automatically* lowers it at night! For full facts, call your local Honeywell office. Or write Honeywell, Dept. FH-6-148, Minneapolis 8, Minnesota.

MINNEAPOLIS **Honeywell**

First in Controls

fueloil & oilheat

H HONEYWELL

Another Honeywell Plus-Profit Idea

"Colorcaps" will be sold to any jobber who wants them, packed in cylinders holding 24 caps. All colored caps are to be assigned to specific marketing areas so that individual oil dealers will be protected by having a single color specified for his use and a competing or nearby dealer will not be able to secure the same color.

The Colorcap company will maintain a master file showing where colors are being used and with the numerous selections of colors available, there appears little likelihood that there will be any overlapping of territories. On the other hand, if any company has a reason for desiring a particular color for their use, they are urged to communicate with Colorcap, 4000 Buena Vista Ave., Baltimore 11, Md., so that their wishes may be complied with. To protect dealers who have bought Colorcaps, once their color has been assigned and the territory defined, changes cannot be made.

An extension of the application of Colorcaps indicates they can be made in other sizes for filling station deliveries or locations where it is necessary to identify fill lines to keep different petroleum products separate.

Fulflo Filters

It's Easy to Clarify Boiler Water for Home Heating Boilers!

- Simply connect a regular FB4 FULFLO Filter . . . the world's best-selling Oil Burner Filter . . . between lower try cock of gauge glass and drain-cock.
- Removes all floating particles of rust, scale and other suspended impurities down to microscopic size to give boiler water of crystal clarity . . . and keep it so.
- Stops water-hammer, increases thermal efficiency, minimizes service calls, prolongs life of equipment. This is done easily and economically with a standard FB4 FULFLO Filter and its regular RF4 Honeycomb Filter Tube.
- When used as a clarifier the standard FB4 Filter can also be used with a special Honeycomb Tube containing chemicals which soften the water, loosen and remove scale and inhibit rust.

Write today for details.

Removal of solid impurities is done with regular FB4 FULFLO Filter and RF4 Tube. USE HONEYCOMB TUBE RW4 FOR ANTI-SCALE RUST INHIBITOR.

IF YOUR JOBBER CAN'T SUPPLY YOU WRITE OR WIRE US

COMMERCIAL FILTERS CORPORATION
Two Main Street, Melrose, Massachusetts

Home Heating and Fuel used in Indianapolis

THE 1952 CONSUMER ANALYSIS, prepared by *The Indianapolis Star* and *The Indianapolis News* in the Indianapolis metropolitan market, surveyed a total of 170,512 families, 68% of whom, or 115,948, owned their own homes. Seventy-six and eight-tenths per cent of all families reported their homes were equipped with central heating facilities and 69.1% indicated they use some method of hot air heat. Individual stoves in 18.2% of all homes was the next most popular type. The table shows how all families reported on methods and types of home heating.

Method of Home Heating

	Per Cent	*Number*
Total Families		
Central Furnace	76.8	130,896
Room Heater	17.7	30,238
Other	5.5	9,378
	100.0	170,512
Type of Home Heating		
Hot Air	69.1	117,879
Hot Water	4.5	7,731
Steam	6.5	11,027
City Heat	1.7	2,899
Individual Stoves	18.2	30,976
	100.0	170,512

The 115,948 owner families next were asked what type of fuel they used and they reported: Coal 47.3% or 54,780; Oil 40.0% or 46,322; Gas 7.4% or 8,583; Coke 5.0% or 5,855 and other fuel 0.3% or 398 families.

Then the 95,600 owner families with central heating indicated that 49.9% or 47,685 used coal; 36.6% or 35,013 used oil; 7.9% or 7,560 used gas and 5.6% or 5,342 used coke for heating.

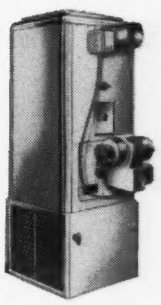
Gasheating Systems operating by States

THE MAY 1952 ISSUE of GAS HEAT magazine publishes final, revised figures for 1951 sales and estimates the number of gasburners in use for central heating by states as of the first of the year.

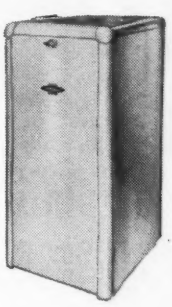
(*Continues on page* 126)

GENERAL MOTORS DELCO-HEAT

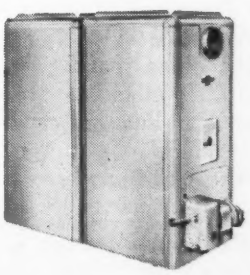
Has the selling features that help you build more sales volume!



This "OPC" Oil Conditionair is designed for utility room, alcove, closet or basement installations. Three sides of the unit are clear of flue outlet, controls, etc., for easy installation in recessed areas. Capacity 75,000 Btu output.



Vertical steel boiler for radiant heating systems —or conventional steam or hot water systems. Fired by the famous Delco-Heat series "F" pressure atomizing oil burner, the "S" Boiler is unmatched for dependable service. Net radiation —300′ steam, 480′ hot water.



"OVC "Oil-fired gravity warm air Conditionair is ideally suited to gravity heating systems in smaller homes. Has Delco-Heat vaporizing oil burner that produces a clean, economical flame. Also available with a blower-filter unit for forced warm air heating. Gravity model 60,600 Btu per hour output. Forced air models 75,000 Btu's.

Closing sales is easy with Delco-Heat equipment. For its many selling features can be demonstrated in terms of extra quality, extra value. And that's what your customers want.

For example, Delco's "PB" Burner, shown above, has the Rotopower Unit which combines the exclusive Rigidframe Motor, fan, pump, exclusive Delco-designed oil conditioner and Thin-Mix fuel control—all in a single compact sealed unit to simplify inspection or adjustment.

The "PB" also features a custom-built turbulator, and a precision machined stainless steel nozzle which delivers just the right air-oil mixture for clean, efficient and economical heat—gives your customers years of dependable, trouble-free operation.

A Delco-Heat customer is a satisfied customer . . . one who usually becomes a regular fuel oil customer, too. Thus you profit in two ways.

More and more progressive heating retailers are taking on the dependable Delco-Heat line. Get the facts about the profit possibilities of a Delco-Heat franchise in your area. Send coupon below for complete information.

CLIP AND MAIL TODAY!

DELCO APPLIANCE DIVISION
General Motors Corp., Dept. FO, Rochester 1, N.Y.
Please send me further information about:
☐ A Delco-Heat Franchise ☐ Oil-Fired Equipment

Name _____

Firm Name _____

Street _____

City _____ *Zone* ____ *State* _____

For a good deal-DEAL WITH DELCO

A complete line of oil and gas-fired equipment

fueloil & oilheat

The final estimates of gasheating sales revise the total upward slightly to 657,440. Sales of conversion burners and boiler units increased, while final furnace sales showed a decline from the first estimates. Gasburners for central heating were shown as 4,682,080 on January 1, 1952, a gain of 594,780 operating from the 4,087,300 in use on January 1, 1951.

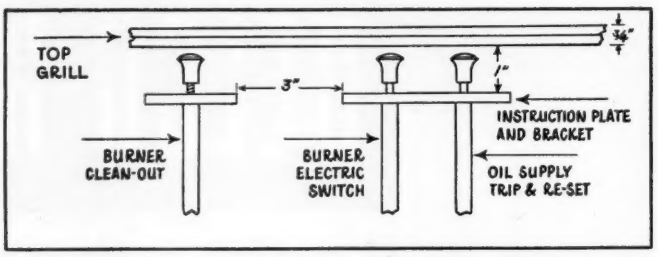
The table shows the breakdown by states of central gasheating installations operating on January 1, 1952.

GAS HEAT also estimates that there were operating on January 1, 1952 a total of 3,120,025 gasfired floor and wall furnaces, an increase from the 2,921,380 in use the previous year. Dwelling units heated by gasfired space heaters total 6,117,525, up from the 5,937,970 estimated to have been operating on January 1, 1951. Estimates of gasfired space heaters per dwelling unit range from three to four units per dwelling, with the average probably varying with the latitude.

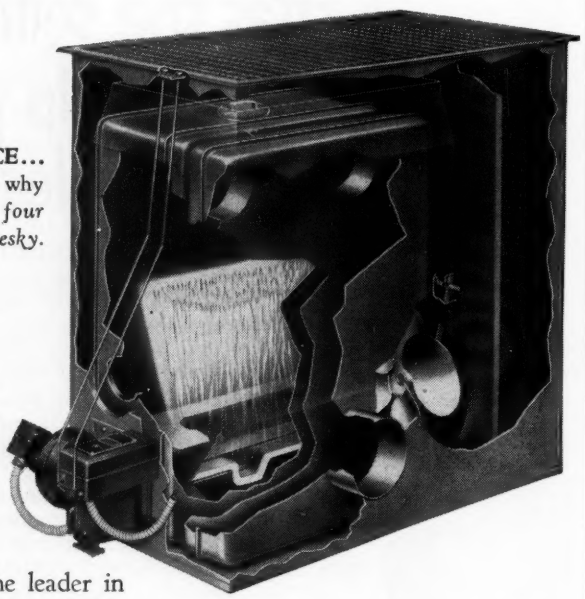
Central gasheating Installations

	Sales 1951	*Operating 1/1/52*
Maine	110	825
New Hampshire	130	1,170
Vermont	15	110
Massachusetts	5,135	45,250
Rhode Island	2,695	7,890
Connecticut	1,575	11,280
NEW ENGLAND	9,660	66,525
New York	30,450	228,365
New Jersey	5,600	65,425
Pennsylvania	42,075	302,045
Delaware	525	3,920
Maryland	9,860	70,440
D. C.	8,545	63,075
CENTRAL ATLANTIC	97,055	733,270
Virginia	6,245	42,240
West Virginia	5,455	41,205
North Carolina	120	300
South Carolina	320	865
Georgia	13,400	63,870
Florida	2,300	3,580
SOUTH ATLANTIC	27,840	152,060
Michigan	17,495	442,725
Ohio	69,770	572,885
Indiana	18,315	66,505
Illinois	26,955	195,635
Wisconsin	20,260	75,540
Minnesota	16,435	137,270
Iowa	23,665	125,845
Missouri	39,445	274,890
Kansas	28,270	155,285
Nebraska	9,640	82,745
North Dakota	200	7,480
South Dakota	3,880	18,760
NORTH CENTRAL	274,330	2,155,565
Kentucky	12,320	46,810
Tennessee	10,475	54,315
Alabama	9,440	26,380
Mississippi	4,440	18,435
Arkansas	4,860	15,095
Louisiana	25,440	50,270
Oklahoma	13,430	70,100
Texas	58,490	132,320
SOUTH CENTRAL	138,895	413,725
Montana	1,050	37,950
Idaho	10	80
Wyoming	600	12,180
Colorado	7,170	126,325
New Mexico	460	25,420
Arizona	6,090	36,110
Utah	3,680	48,550
Nevada	15	35
MOUNTAIN STATES	19,075	286,650
Washington	1,320	9,115
Oregon	3,285	23,070
California	89,980	842,100
PACIFIC	90,585	874,285
UNITED STATES	657,440	4,682,080

NOW! All Controls at Floor Level in All KRESKY Floor Furnaces



ANOTHER CONVENIENCE...
another example of why
one out of every four oil floor furnaces sold is a Kresky.



Whenever improvements can be made in oil heating equipment . . . improvements that are sound and free of service troubles for the user . . . you can be sure you will find them on KRESKY equipment.

For Kresky has been the leader in the oil heating industry since 1910. Kresky patented the first forced-air induction oil burner. It marketed the first oil floor furnace. And today its progressive engineering keeps it in the lead *with features that are practical and trouble-free.*

The Kresky line of furnaces is complete . . . there's a model to meet the requirements of every house:

4 Flat Floor Register Models,
40,000 to 112,800 BTU
3 Dual Wall Register Models,
50,000 to 72,800 BTU
A great new Wall Furnace,
57,500 BTU
also Basement, Utility and
Fireplace furnaces

. . . and Kresky's Famous Burner is in Every One

The Kresky Forced-Air Induction "Retort" Burner is patented and exclusive. It gets heat out of every drop of oil . . . it's unequalled for clean, low-cost oil heating.

SEE YOUR KRESKY DEALER, OR
— — — MAIL THIS COUPON TODAY — — —

KRESKY MFG. CO., INC. 652-FOH
2nd and H Streets, Petaluma, Calif.

Send me FREE copy of your new Kresky Furnace specification folder... also name and address of my nearest Kresky distributor.

NAME_____

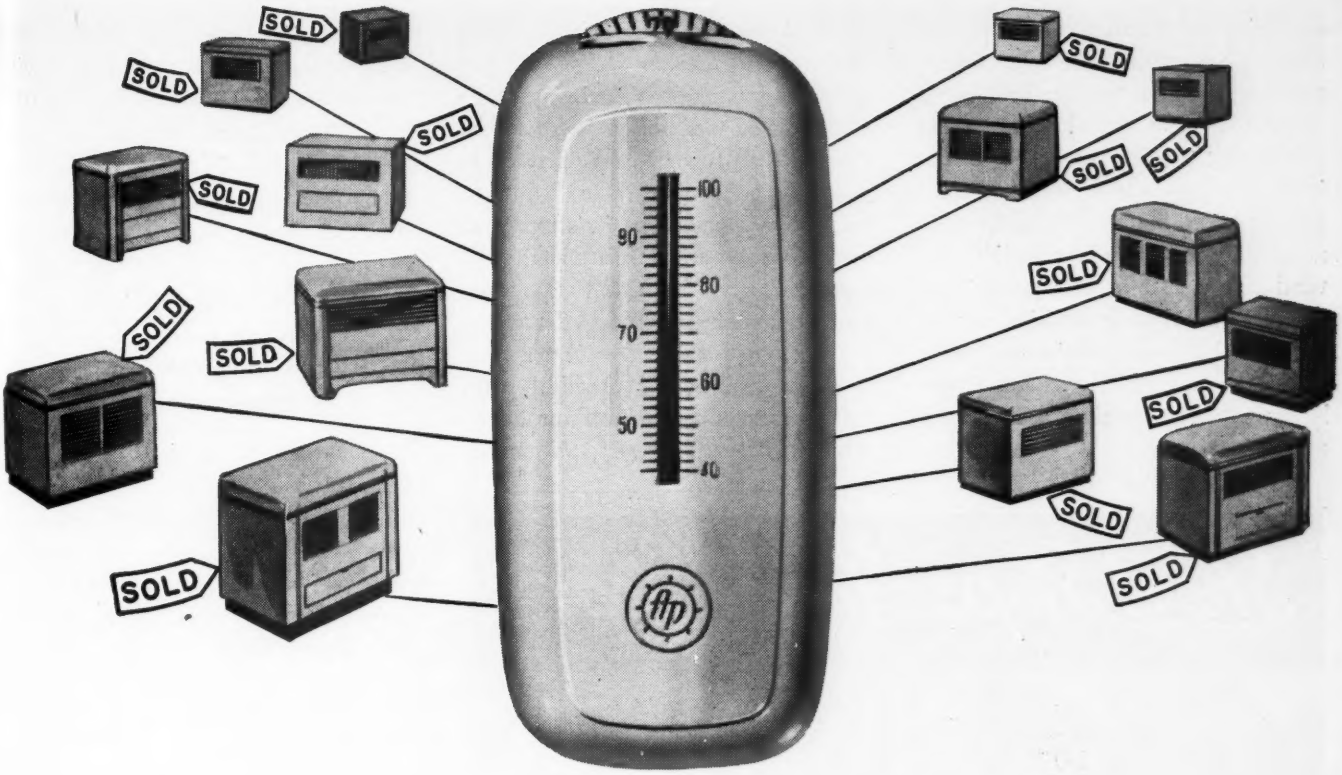
ADDRESS_____

CITY_____ STATE_____

❖

CMP Regulation 6 will relax construction Curbs

EFFECTIVE JULY 1 CMP Regulation No. 6 is to be amended to provide, among other changes, for a revocation of the ban on recreational construction and adding permission to self-



Hitch this Automatic Control to every space heater sale for extra profits

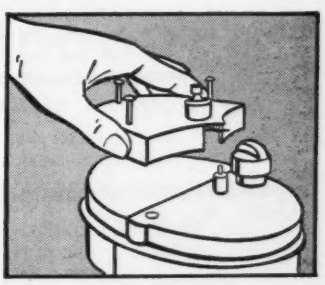
What brand do you sell?

ALLEN'S	INTERNATIONAL
BARNES	JUNGERS
BENNER-NAWMAN	KEMAC *(Canada)*
BEYER	KLEER-KLEEN
COLE HOT BLAST	LACO
COLEMAN	LONERGAN
COLEMAN *(Canada)*	MAGIC CHEF
CREST *(Canada)*	MARCHAND *(Canada)*
CREST-AIRE *(Canada)*	MONARCH
CUSTOM AIRE	MONARCH *(Canada)*
DOMESTIC	MONOGRAM
DRACO FIREBALL	NESCO
DUO-THERM	NORGE HEAT
ENTERPRISE	ORAN
ENTERPRISE*(Canada)*	PERFECTION
ESTATE HEATROLA	PREWAY
EVANS	QUAKER
EVEN-TEMP	QUAKER *(Canada)*
FAWCETT TORRID-OIL*(Canada)*	SAFEWAY
FESS*(Canada)*	SCOTSMAN
FINDLAY *(Canada)*	SIEGLER
FLOOR-O-LATOR	SILENT FLAME
FLORENCE	SUPERFLAME
GILLEN	THARRINGTON
H. C. LITTLE	THERMO-PRODUCTS
HERCO HEAT FLO *(Canada)*	TORRIDAIRE
	VIKIMATIC
	WASHINGTON FRUGAL

Your customers won't be without Automatic Control . . . once you show them

A-P Comfort Control is the easy-selling accessory that makes every space-heater customer a *satisfied* customer. If you sell any of the space heaters on the list at left, you can offer the comfort and convenience of thermostatic heat control, *plus* fuel-saving economies . . . for less than the cost of a subscription to a favorite newspaper.

So easy to install, you can pocket the added profit without the worry of service problems. Start cashing in today with this *Extra-Profit* builder. *Show it . . . and you're sure to sell it.*



Easy to install

Conversion top easily attaches to regularly furnished manual control. Kit furnished complete with thermostat and plug-in transformer. Choose A-P Electric or Mechanical control — for gas or oil-fired heaters. Specifically designed and built to exact space heater requirements.

A-P CONTROLS CORPORATION

(formerly Automatic Products Company)

N. 32nd St., Milwaukee 45, Wis. • In Canada: A-P Controls Corp. Ltd., Cooksville, Ont.

authorize per quarter: 5 tons of carbon steel, not to include more than 2 tons of structural shapes; 200 lbs. of copper; 250 lbs. of aluminum. On October 1 the amendment will authorize increases for self-authorizations per quarter up to 25 tons of carbon steel, no limit on what portion may be structural shapes; 750 lbs. of copper; 1,000 lbs. of aluminum. In addition, the restriction that now permits the use of aluminum only in industrial and public utility construction will be removed.

Transportation facilities; public utility systems, water and sewage systems; administration buildings, garages and service buildings for industrial projects, owned and operated as part of the project; crane runways and baler installations in scrap yard operations are to be reclassified from commercial to industrial categories when the changes become effective.

One ton of stainless steel per project, per quarter, for chemical plant construction may be self-authorized after July 1 and, finally, an amendment of NPA Order M-100, covering housing construction, after July 1 will provide for self-authorization of 1,500 lbs. of new domestic structural shapes and 250 lbs. of aluminum in addition to the present allowance of steel and copper.

Short Stops... More Stops...

For Trucks Equipped With *Quick-Delivery*

"NEWTYPE" STYLE R-43 FUEL OIL HOSE

KINKPROOF, NON-FLATTENING—Stays round, on or off the reel.
FAST, FULL-CAPACITY FLOW from truck to nozzle, always.
LIGHT IN WEIGHT . . . EXTREMELY FLEXIBLE . . . Easy to handle.
EXCEPTIONALLY STRONG, with tough, long-lasting cover.

Mail Coupon Below for Illustrated Folder

GOODALL RUBBER COMPANY

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.
Branches: Philadelphia • New York • Boston • Pittsburgh • Chicago • Detroit • St. Paul • Los Angeles
San Francisco • Seattle • Portland • Salt Lake City • Denver • Houston • Distributors in Other Principal Cities

Est. 1870

GOODALL RUBBER COMPANY
Whitehead Road, Trenton 4, N. J.
Date _____
Please send copy of Folder describing "Newtype" Fuel Oil Hose.
FIRM NAME .....ADDRESS .....
CITY .....ZONE....STATE.....

Standard proposed for furnace-burner Units

COMMERCIAL STANDARD TS-5107 has been proposed to apply to warm-air furnaces equipped with pressure atomizing or rotary type oilburners, marketed by the manufacturer as furnace-burner units, both gravity and forced air types. It does not apply to floor furnaces, nor furnaces that are furnished without burners. Copies of the Standard have been distributed to interested persons and companies and upon receipt of endorsements from a majority, and in the absence of active, valid opposition, the Standard will be announced formally and promulgated.

TS-5107 is based upon proposals of the National War Air Heating & Air Conditioning Association, and adjusted as recommended by other organizations. The 12 sections of the Standard open with an explanation of its purpose, scope and definition of the terms used therein. General requirements are described as conformity with safety requirements of Underwriters' Laboratories; durability in service, as outlined in a section of "Furnace design and construction"; dependability, that is being capable of functioning reliably when installed; reasonably free from radio interference, combustion and/or mechanical noise; each furnace to be laboratory tested as outlined in test codes included; meeting minimum efficiency requirements as explained in the section on "Performance" and each furnace to be accompanied by a complete set of instructions. An oilburning furnace-burner unit shall have an installation certificate, listing make and model and including CO_2 readings at flue connection, over-fire and breeching draft, flue gas temperature and firing rates.

Under "Performance" it is set forth

"We've been sold by Dodge performance!"

... says **HARRY S. McGAUGHEY,** *Manager, W. H. Pugh Oil Co., Racine, Wisconsin*

"We purchased our first Dodge truck in 1936," says Mr. McGaughey. "And that truck is still being used constantly in our fleet. Why—we didn't even have our first engine overhaul on this truck until 1946!

"Because of such performance we now have eight Dodge trucks in operation. We find that Dodge *'Job-Rated'* trucks serve our purpose admirably.

"As any oil man knows, the engine is used to pump material off of the truck into customers' tanks, in addition to its regular use in pulling the truck. This means the engine is subjected to considerably more wear and tear than the speedometer mileage would indicate. Under these conditions, Dodge *'Job-Rated'* trucks stand up so well that we've been sold by Dodge performance!"

Of course when it comes to Dodge trucks, Mr. McGaughey's experience merely echoes the enthusiasm of users everywhere. And with good reason! Because *only* Dodge trucks are *"Job-Rated"—factory-engineered* to fit the job . . . to save money and last longer!

Just climb behind the wheel of a big Dodge 3-tonner, for example. Up front there's a husky, high-compression power plant that makes fuel and upkeep bills stay extra low . . . thanks to such advantages as 4-ring pistons, chrome-plated top rings, intake and exhaust valve seat inserts. A Dodge can take on far bigger payloads, too, thanks to better weight distribution!

Surely, you'll want to hear the whole story on the thrifty, dependable performance of Dodge *"Job-Rated"* trucks. And the fellow with the information you want is just around the corner. He's your Dodge dealer—a mighty friendly guy to have dealings with.

DODGE "Job-Rated" TRUCKS

that the unit's heating surfaces must not exceed 930°F. above inlet air temperature, except where special materials are used for higher temperatures. Also maximum temperature rise above inlet air temperatures at the filters is not to exceed 90°F.; at the furnace blower bearings, 100°F. When tested at the manufacturer's recommended draft and at rated output, operating efficiencies, under the Standard, are to 75% bonnet efficiency for forced air units, 70% for gravity furnaces.

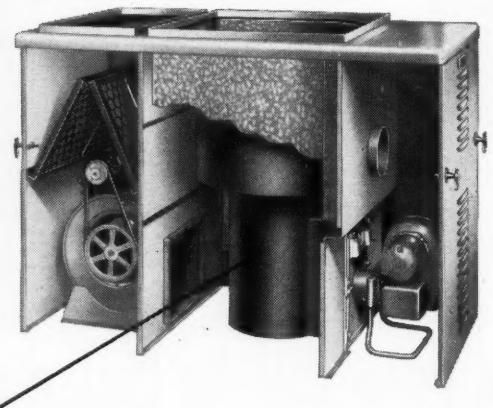
Sections next give complete test data for forced air and gravity furnaces, explain how furnace ratings are to be determined and detail the information that must be shown on the label. This information includes manufacturer's name with the Commercial Standard number TS-5107, bonnet capacity in Btu/hr, firing rates in gph and manufacturer's specified draft at furnace outlet.

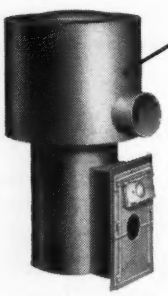
When installed, in addition to the certificate already mentioned for oil-burning furnace units, it is required that CO_2 be not less than 8% and flue gas temperatures be no higher than 700°F. Also, there shall be no smoke discharged from the chimney while test readings are being taken. Installed test procedures are described in detail.

Copies of the proposed Commercial Standard TS-5107 may be secured, or endorsements sent to the Commodity Standards Division, Office of Industry and Commerce, U. S. Department of Commerce, Washington 25, D. C.

INSIDE STORY

You'll make EASIER sales, more sales when you tell the inside story of International Economy® Oil or Gas Units.





Heating Element

Heavy 14-Gauge Steel

Welded for strength as integral unit

No cement joint—no bolts in inner casing

Firebrick door and base reinforced with steel rods

High-efficiency chrome steel combustion chamber

Your customers can *see* the *outside* features of International Economy Gas or Oil Units . . . the heavy 20-gauge steel cabinets, the handsome, lifetime enamel finish and the modern design that fits proudly into any home. But when you tell them the *inside* story—and show them the exclusive International advantages—you're really going to sell them!

Show them the rugged 14-gauge steel heating element—welded with no inside joints to leak. Point out that all air is *blown*—not drawn—over the heating surfaces. Let them see the efficient chrome steel combustion chamber—learn how it may be installed or removed in seconds. Mention the steel reinforcing rods buried in the firebrick door and base . . . that *every* unit is easily convertible from oil to gas . . .

Get the Inside Story . . . *it's a profit story for you.*
See your International distributor or write us today.

110 years of heating experience at your service . . .

INTERNATIONAL HEATER COMPANY
UTICA 2, NEW YORK
WESTERN OFFICE AND WAREHOUSE: 1933 WENTWORTH AVE., CHICAGO 16, ILL.

❖

Robert A. Hunt has been appointed assistant chief engineer, Rochester Manufacturing Co., Rochester 10, N. Y. Hunt, who has been handling special development work and design for the company for the past five years, will specialize on design and development problems in connection with electrical instruments for the indication of liquid level, pressure and temperature.

Emile Estoclet has been appointed regional manager, Industrial Div., York-Shipley, Inc., York, Pa., for eight eastern states. He will be engaged on a program of setting up new outlets for the industrial power equipment. Estoclet joined the staff of Shipley Heating and Cooling Div. as industrial sales engineer in 1951. Prior to that he headed his own business.

J. M. Purdum has been promoted to advertising manager, Perfection Stove Co., Cleveland 4, Ohio. Purdum joined Perfection as assistant advertising manager in 1945. Previously, he had been with the Easy Washing Machine Corp., Altorfer Bros. Co., Easy Housekeeping Shop and the Apex Mfg. Co.

George Crothers has been appointed manager, Toronto branch office for the General Controls Co., Glendale, Calif. Crothers joined General Controls in January, 1952. He has held executive positions with Mall Tool, Ltd., Canadian Propellers, Ltd. and the Ford Motor Co., Ltd., all of Canada.

They cost no more . . . So why settle for less!

THE BEST AUTOMATIC AIR VALVES FOR EVERY HOT WATER HEATING JOB ARE LABELED . . .

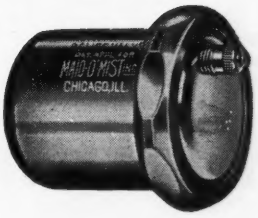
MAID-O'-MIST AUTO-VENT

NUMBER 7 AUTO-VENT

For mains, pipe lines, unit heaters, convectors, panels, coils, etc. A favorite . . . proved dependable on hundreds of thousands of installations.

- Self-closing, float-controlled valve
- Non-ferrous metals
- No air chamber required
- Designed for pressures up to 75 lbs.

For vertical mounting only. Size 4⅜" x 2¼" with ⅛" I.P. female connection.



NUMBER 27 AUTO-VENT

For convectors and for space limitations.

- Dependable float-operated valve
- Non-ferrous metals
- No air chamber required
- For pressures up to 50 lbs.

For horizontal mounting only. Size 3" x 2¼" with ⅛" I.P. female side connection.

NUMBER 72 AUTO-VENT

For convectors, baseboard and free-standing radiation.

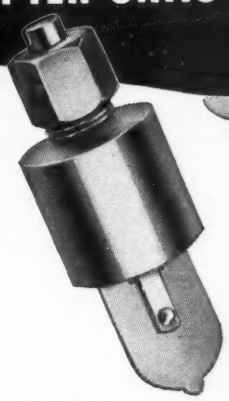
The fastest venting valve (expansion type) on the market!

- Expansion and contraction confined to 4 vent slots only
- Special composition control disc
- Internal siphon tube
- No air chamber required

For vertical or horizontal mounting. Size 1¼" x ½" with ⅛" I.P. male connection.

MAID-O'-MIST BALANCING VALVE ADAPTER UNITS

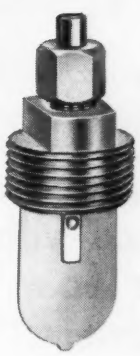
MAKE ANY COPPER, BRONZE OR CAST IRON TEE A BALANCING VALVE!



No. 14 Balancing Valve Adapter Unit for ⅜", ½", ¾", 1" nominal copper tees.

Any stock tee, plus the Adapter Unit completes a balancing fitting for hot water heating systems. These new units, quickly soldered or sweat-fitted into copper and bronze tees or threaded into cast iron tees, regulate the flow of hot water through radiators, convectors, baseboard panels, radiant coils, return mains and branches. Precision made of non-ferrous metals.

Full free flow through the tee. No restriction except for the balancing required.



No. 15 Balancing Valve Adapter Unit for ½", ¾", 1", 1¼" cast iron tees.

NUMBER 67 AUTO-VENT

For convector and baseboard radiation.

- Self-closing, float-operated
- Compact size
- Non-ferrous metals
- No air chamber required
- For pressures up to 30 lbs.

For vertical mounting only. Size 3-3/16" x 1½" with ⅛" I.P. male connection.

MAID-O-MIST Inc.
HEATING SPECIALTIES

AUTOMATIC HUMIDIFIERS . . . . . AUTO-VENTS
WATER LINE CONTROLS . HEATING SPECIALTIES

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD . CHICAGO 41, ILL.

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

Independent Oil Men of N. E. hold annual Convention

JOHN SCOTT, foreign correspondent of *Time, Inc.*, was the featured speaker at the 28th annual convention banquet sponsored by the Independent Oil Men's Association of New England, Boston, Mass., which culminated a day-long series of talks and discussions held at the Hotel Statler, Boston, June 4. Eugene Holman, president, Standard Oil Co. (New Jersey), was the guest of honor.

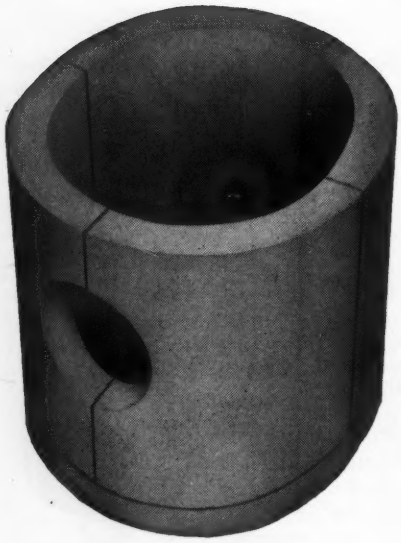
Scott, an expert on Russia, talked on "The Press and the Cold War." Scott is the author of *Beyond the Urals* and *Europe in Revolution.*

Holman spoke at a special luncheon and answered questions from the floor.

At the morning forum, L. T. White, manager of Business Research and Education for the Cities Service Oil Companies and author of many articles on the operation of oil distribution, outlined the opportunities for retailers to strengthen their business through training of personnel.

The afternoon forum was devoted to a discussion of the pocketbook importance of public relations to the independent oil marketer. Thomas Holton Hoare, Boston public relations consultant, was a member of the panel.

Do Your PRESENT PRECAST CHAMBERS Give You ALL these Advantages?



1. Low initial cost.
2. Low installation cost — only 5 pieces to assemble.
3. K-factor equal to insulating brick.
4. Excellent performance with either high or low pressure burners.
5. Scientifically packed to prevent breakage.

. . . if the answer is NO -- contact us NOW!

KOLB REFRACTORIES COMPANY Meadow & Jackson Sts. Philadelphia, Penna.

KolbKast Insulated Chambers

MOHA hears K.O. Ralphs; elects Officers and Directors

K. O. RALPHS, New England district sales manager, Timken Silent Automatic Oil Heating Co., was the guest speaker at the monthly dinner meeting of the Massachusetts Oil Heating Association held at the Hampton Court Hotel, Brookline, Mass., May 20.

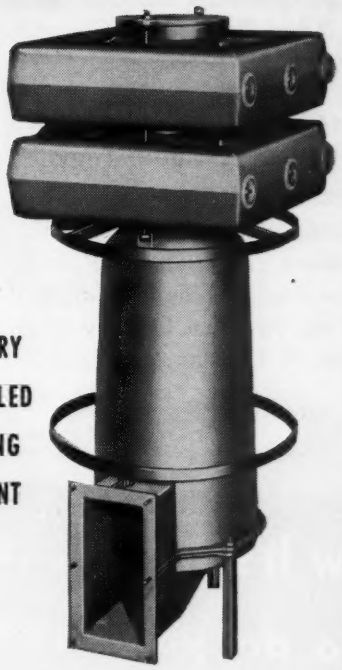
Ralphs, who spoke on the subject, "Selling Oil Heat," started as a serviceman for Brockton Oil Heating Co., a Timken distributor, 20 years ago. Within four years, he moved into the sales department and three years later became sales manager. Following his return to civilian life after World War II, he received the position he now holds.

Elections of officers for one-year terms were held. Elected president was Mahlon Walker, Godfrey Fuel Co., Milton; vice-president, Thomas Scott, Jr., Buckley & Scott Utilities, Inc., Watertown; treasurer, Stanley Wood, Automatic Heating Corp. of Mass., Boston; and secretary, Eugene Brody, Stetson Fuel Co., South Boston.

Elected directors for one-year terms were: Richard L. Gardner, General Heat & Appliance Co., Boston; Fred Brehm, General Oil Co., Medford, Butler Scott, Scott & Williams, Quincy; Mrs. C. Y. Woodbury, C. Y. Woodbury, Quincy; J. L. Matthewman, White Fuel Corp., Boston; S. T. Campbell, Waltham Oil Burner, Boston; E. L. Kimball, E. L. Kimball Co., Malden; Charles McAlpine, Morton Oil Co., Malden; D. E. Kno[illegible],

Luxaire®

Cast Iron Heating Elements Constructed *Without* Objectionable Vertical Joints



FACTORY ASSEMBLED HEATING ELEMENT

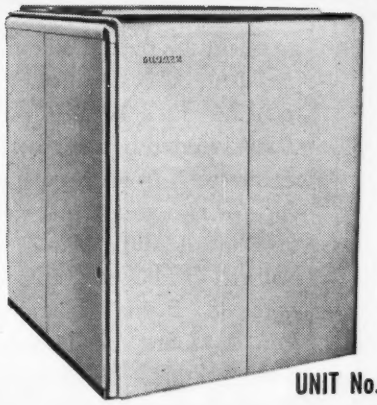
Order a Luxaire Cast Iron Furnace for your next Gas Installation!

Order the Cast Iron Furnace with the long-lived round combustion chamber—the cast iron furnace that has been ingeniously designed with vertical joints eliminated.

The heating elements of these time proven units are now assembled at the factory to save you time and money.

Order one from your nearby Luxaire jobber and see the other sales producing improvements made in the new 1952 models.

Few gas fired, cast iron units, if any, can match the low prices made possible by Luxaire's ingeniously simple design.



UNIT No. CA-140—CA-200

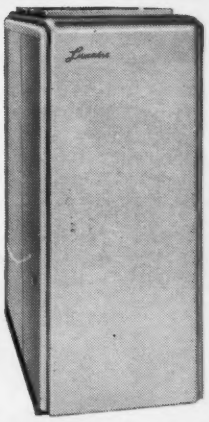
For *Small* Homes

For *Large* Homes

50,000 to 200,000

B.T.U. Input

UNIT No. CA-90—CA-100



THE C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

Luxaire HEATING & AIR CONDITIONING UNITS

fueloil & oilheat

Jr., Oil Service Co. of New England, Boston; William Cooper, Mass. Heating Corp., Cambridge and John Landerman, Allied Engineering Co., Allston.

N. C. Oil Jobber Group holds Convention and golf Tourney

THE SPRING CONVENTION and golf tournament of the North Carolina Oil Jobbers Association, Raleigh, N. C., was held at the Carolina Hotel and the Pinehurst Country Club, Pinehurst, N. C., May 25, 26 and 27.

The three day jobber session combined many business and social activities. Listed among those who gave talks were Frank Parker who spoke on "Fuel Monopolies"; W. A. Stokely who discussed the "Office of Price Stabilization"; Joseph S. Vincent whose subject was "Group Insurance"; Robert Gray who described how "Fuel Oil Drives the Industry" and Edward Wimmer, who talked on "Some Important Matters."

Frank W. Lovejoy, guest speaker at the annual banquet, spoke on the subject, "The Pearl of Wisdom." Sterling D. Wooten, president of the group, acted as toastmaster.

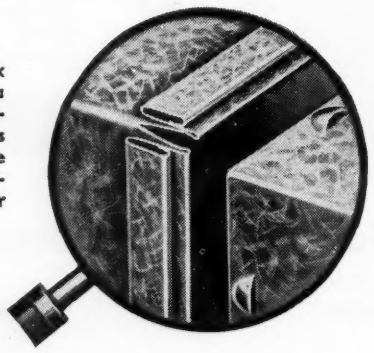
A number of prizes donated by various companies, were presented at the banquet.

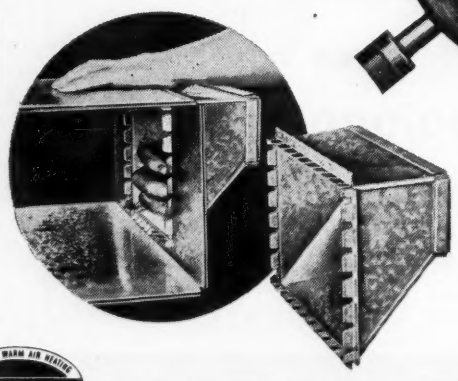
Now It's EASY...and PROFITABLE
to do your own ductwork with
ADELTA Standardized Fittings

You can make more profit on every warm air job when you use easy-to-assemble ADELTA standardized ducts and fittings. There's no need for special sheet metal equipment or highly trained personnel. Adelta precision-made fittings—with exclusive time-saving features* like those illustrated—make it easy for you to do the whole job quickly . . . more profitably.

***Here's proof:**

Our exclusive One-Piece Snap-Lock Cleat is featured on all Adelta units, including take-offs and reducers. Just push two sections together, and presto!—you have a rigid, leakproof joint . . . without any crimping, notching or drilling to slow up the job.





Adelta's pre-notched collar edges save time on every collar connection. No bothering with snips, pliers and hammer. Just push the collar edges closed with your fingers to get a tight, permanent connection.

Write today for the Adelta 1952 catalog.

INDOOR COMFORT

ADELTA MANUFACTURING CO., INC.
Standardized Pipe, Duct & Fittings for Warm Air Heating
2101 Ellsworth Street Philadelphia 46, Penna.

OHI of N. E. hears Gray; elects Directors, Officers

MEMBERS of the Oil Heat Institute of New England, Boston 15, Mass., at their annual meeting at the Hotel Bradford in Boston, May 14, heard Robert Gray, editor, FUELOIL & OIL HEAT speak on "Looking Ahead Through 1952."

Gray discussed supplies of oil and materials, government controls, now and ahead and what the dealer should do to protect the future of his business.

Elected to the board of directors for three-year terms were: Jerome W. Cross, Cross Coal Co., Lawrence, Mass.; C. Everett Elliott, Charles L. Elliott Co., Danvers, Mass.; Marcel A. Fugere, Manchester Coal & Ice Co., Manchester, N. H.; Stanley A. Hultman, C. V. Hultman & Sons, Inc., Brockton, Mass.; Spencer A. McLellan, Geo. E. Warren Heating Corp., Lynn, Mass.; Frank J. Murphy, F. J. Murphy Oil Co., Bristol, R. I.; Joseph Olney, Jr., Olney & Payne Bros., Inc., Pawtucket, R. I. and Irving R. Patterson, City Oil & Coal Co., Inc., Torrington, Conn.

The officers elected for the coming year by the new board were: president, Joseph Olney, Jr.; 1st vice-president, C. Everett Elliott; 2nd vice-president, A. L. Dwelly and secretary-treasurer, Fred N. Beckwith.

Also elected by the board were representatives from associate membership for two-year terms were Everett L. Kimball and Wilson O. Smith. Named to the executive committee were: C. Everett Elliott, chairman; Don P. Hobbs and Thomas J. Scott.

A cocktail hour followed by the annual banquet was held that evening.

Industry Group to promote large warm air Systems

SEEKING TO PROMOTE the more general use of warm air heating systems in larger installations, the publicity

What...a Counterflow WITHOUT "BUGS"?

YES . . . before we designed this furnace we asked the men who knew—heating contractors, consultants, distributors, dealers, installers and service men.

They told us what they wanted in design . . . in blower size . . . performance . . . accessibility . . . flue location . . . and a dozen other things—as well as what they *didn't* want! The new Perfection Counterflow furnace is the result . . . the "bugs" have been designed *out* . . . desired features designed *in*.

This is the Counterflow furnace to sell and install. You'll "make out" better on every job.

All Counterflow furnaces are NOT alike!

EASY, LOW-COST INSTALLATION. Comes as a packaged unit, fully wired and assembled. Three simple connections to make—fuel supply, 110-volt line and thermostat cable.

READY ACCESS through *front* panels to fully-enclosed controls, burner, blower, motor and cleanout ports.

CONVERTS TO GAS IN 15 MINUTES. Oil burner slips out for easy replacement with Perfection gas burner.

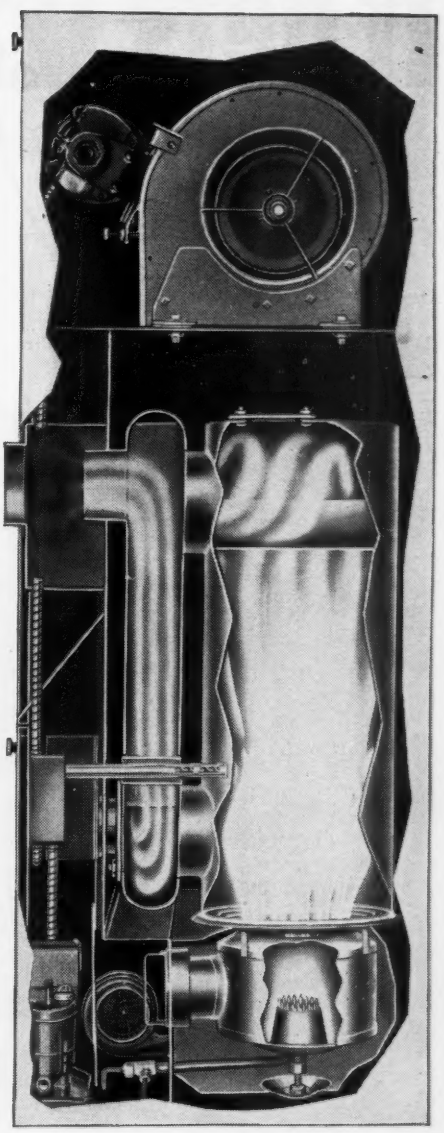
COMPACT. Height—68⅞"; width—22"; depth—25".

DURABLE, ATTRACTIVE. Sturdy box frame construction; rust-proofed casing handsomely finished in gleaming white baked enamel.

HIGH EFFICIENCY. Perfection vaporizing burner with positive supercharged draft.

CAPACITY: F601—74,000 BTU OUTPUT.

PERFECTION STOVE COMPANY
7352-D Platt Avenue • Cleveland 4, Ohio



Switch to **Perfection**
SUPERFEX
Counterflow Furnaces

Fueloil & oilheat

subcommittee of the Industrial and Commercial Heating Committee, National Warm Air Heating and Air Conditioning Association, Cleveland 14, Ohio, met March 18 to discuss future plans.

R. C. Jaye, Syncromatic Corp. and chairman of the Committee, said, "The market for large-size equipment contains great potential even though at present we only command a small percentage. This has been, to a great extent, due to the fact that it is traditional belief in the field of industrial and commercial construction that this type of heating should be handled by the products manufactured by our competition industry."

Steps which the publicity subcommittee are taking to promote their aim are the placing of stories about the advantages of warm air heating in larger installations in trade magazines.

Members of the publicity subcommittee are Howard S. Beck, Jackson & Church Co., George M. Fraser, Surface Combustion Corp. and Edward P. Pearsall, Prat-Daniel Corp.

So DIFFERENT
It gets U.S. Patent

SINCLAIR ANTI-RUST FUEL OIL

—with amazing rust inhibitor, RD-119®—is so different from "old-type" fuel oils it has been awarded a U.S. Patent. This great new product of Sinclair Research, when used regularly, *actually* protects against rust and corrosion that clog filters and burner nozzles—reducing service calls and building good will *for you!*

SINCLAIR
FUEL OIL WITH RD-119®

ANTI-RUST Super Flame ®

I-B-R revises Schedule of Modern Heating Schools

THE INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS, N. Y., N. Y., has announced a revised schedule for the School of Modern Heating for the remainder of 1952.

A total of 4,450 students have attended the I-B-R School of Modern Heating since it began in April, 1950. Tuition for the school is $23.00.

Following is a list of schools and locations:

June 10-12: Manheim Legion, Manheim, Pa.; June 17-19: Public Service Electric & Gas Co. Auditorium, Newark, N. J.; June 24-26: Hartford Courant Auditorium, Hartford, Conn.; August 19-21: Providence, R. I.; August 26-28: Albany, N. Y.; Sept. 9-11: Detroit, Mich.; Sept. 16-18: Saginaw, Mich.; Sept. 23-25: Toledo, Ohio; Sept. 30-Oct. 2: Erie, Pa.; Oct. 6, 7, 13, 14, 20, 21: Westchester Lighting Co., White Plains, N. Y.; Oct. 9, 10, 16, 17, 23, 24: Brooklyn Union Gas Co., Brooklyn, N. Y.; Oct. 28-30: Wilmington, Del.; Nov. 5-7: Johnstown, Pa.; Nov. 18-20: Worcester, Mass.; Dec. 1-3: Stamford, Conn.

OHI of Greater Washington adopts advertising Program

OIL HEAT INSTITUTE OF GREATER WASHINGTON, Washington, D. C., at its meeting April 29, adopted plans for its advertising program for 1952 and has named Kal, Erhlich & Merrick of Washington, its advertising agency to handle the program.

The Institute's advertising will have three types of approach. One will be the builder type of advertisment which will be addressed to the builder but intended for reading by the general public; second will be the testimonial type having a photograph of an actual house with a testimonial from the owner relating his cost figures for the oil heating of his home and third, a smaller general type of advertisement to work in with the other two types.

Election of directors for a term of three years was also held. Elected were H. E. Bealer; R. L. Counts and J. W. Langford.

Report from Jenney—Boston...

"Go Modern, Go White 3000!"

HERE'S THE NEWEST, most efficient tanker you can buy—the White 3000. It's tailored right to your exact operating conditions, yet built to highest production standards and precision.

Maneuverability . . . driving ease . . . time and energy-saving these are accomplished first day on the route. And, what's more, extra carrying capacity and extra delivery efficiency mean MORE DELIVERIES . . . LOWER COST PER DELIVERY.

Ask your White Representative for facts about its exclusive advantages for your business.

THE WHITE MOTOR COMPANY
Cleveland 1, Ohio

Tips its cab to service

For More Than 50 Years The Greatest Name in Trucks

THREE-WAY SAVINGS

Jenney Manufacturing Co., Boston, Mass., has two White Model 3026 tankers . . . four Model 3022 tractors. "The extra gallonage capacity of the 3000 series Whites," reports Kenneth T. Howe, vice-president of Jenney, "plus outstanding maneuverability on the road and in the filling stations, plus the ease of servicing them, make these units ideal for our delivery service."

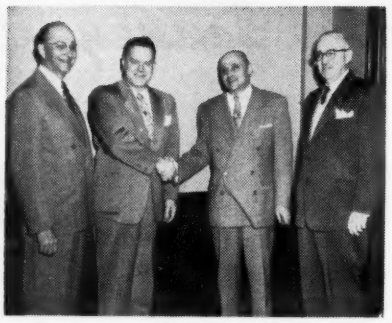
Western OIIC hears of need for Research in oil Industry

OIL COMPANIES that spend the most money for research are highest on the list of those paying dividends to their stockholders, Dr. Charles N. Kimball, president of the Midwest Research Institute, Kansas City, Mo., told 35 committee members of the Western Oil Industry Information Committee at a luncheon session in the Hotel Continental in Kansas City.

Dr. Kimball said that he based his statement on two lists which had been prepared for him by unrelated sources. One includes the best research companies and the other listed the best possibilities on the stock exchange. He said that thirteen out of 15 names of firms appeared on both lists and five of them are in the petroleum business.

The scientist said that the economic future of the Midwest is dependent upon the technological advances in the field of petroleum research.

"The petroleum companies who have equipped themselves with scientific knowhow," Dr. Kimball said, "lead the field in the percentage of sales dollars spent in research." He said greater emphasis is being placed on scientific research by petroleum interests across the nation and especially in the Midwest.



A. V. Fraser, *new vice-chairman of the Missouri-Iowa-Nebraska district of the Oil Industry Information Committee, is welcomed to his post by Harry E. Milton, district chairman, and two other vice-chairmen at a recent meeting of the executive committee of the OIIC district in the Kansas City club, Kansas City, Mo. Shown above (left to right) are: Harold F. Nelson, Sinclair Refining Co.; Fraser, Standard Oil Co.; Milton, Milton Oil Co., and Dan A. Breen, Skelly Oil Co.*

At a morning session of the OIIC leaders, Melvin Hall, Melvin Hall Oil Co., Noel, Mo. and president, Missouri Petroleum Association, spoke on "An Oil Jobber's Need for Public Relations."

Robert W. Hadlick, executive secretary of the Missouri jobbers' group, urged major company officials attending the OIIC meeting to stimulate their employees to greater activity in OIIC work.

J. B. Dickey, division manager for the Continental Oil Co., Kansas City, also spoke to the group on the need for public relations. Harold F. Nelson, sales manager for the Sinclair Refining Co., Kansas City, vice-chairman for the Missouri-Iowa-Nebraska district of the OIIC, was in charge of the meeting.

Philadelphia OHA Group names advertising Agency

THE OIL HEAT ASSOCIATION OF METROPOLITAN PHILADELPHIA, Philadelphia, Pa., has appointed Shaw & Schreiber, Philadelphia, to handle its advertising and general promotion campaigns.

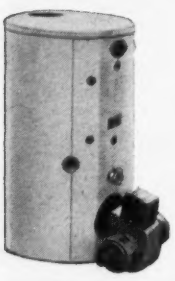
MANVILLE

• Compact . . . Tubeless Non-Pulsating

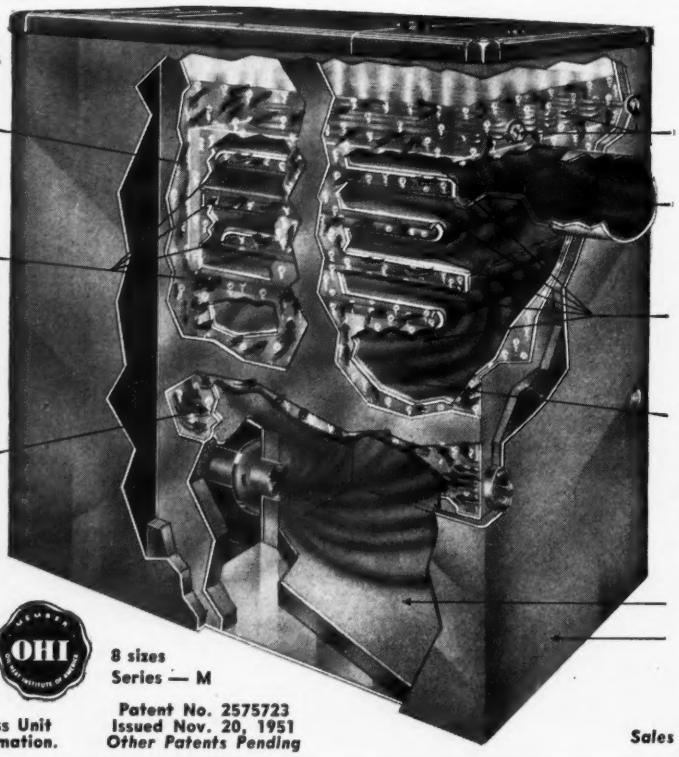
• 5 Year Factory Certified Guarantee against leaks

• Specially Designed for Oil Firing Easily adapted to Gas Firing

(Convertible to Coal in Emergency)



Low Priced Vertical Tubeless Unit 5 sizes . . . Write for Information.



8 sizes Series — M

Patent No. 2575723 Issued Nov. 20, 1951 Other Patents Pending

TUBELESS STEEL BOILERS WITH THERMO-FLO PRINCIPLE

Greatest Improvement in Boiler Design in 50 years

Developed through many years of experience in pioneering Tubeless Steel Boilers.

THERMO-FLO System of Induced Water Circulation within the Boiler assures Highest Performance, Quick Recovery and heats 3 times faster than similar designs that are now as obsolete as the old Model "T" Ford.

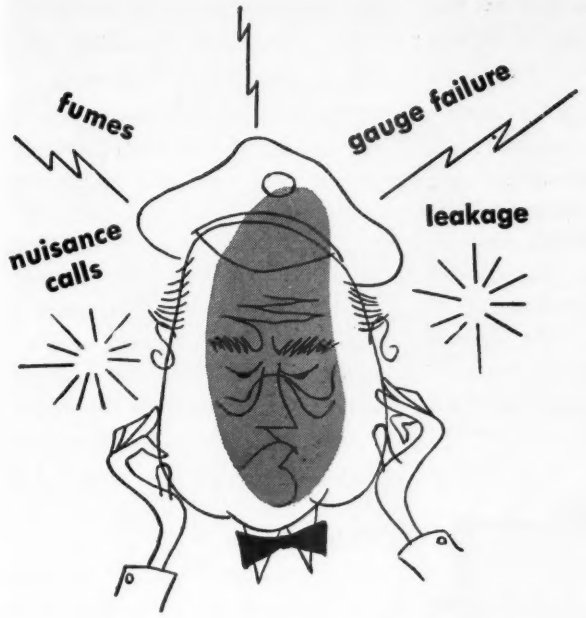
See us at the N.P.H.E. Atlantic City, BOOTH . . . 716

Write for full information

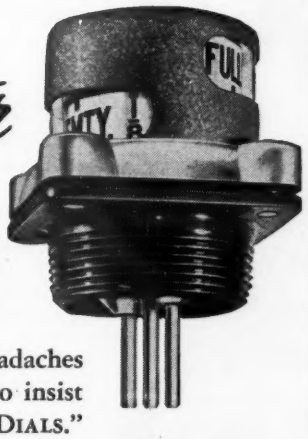
MANVILLE BOILER CO., INC.

Factory:—Hackettstown, New Jersey

Sales Offices:—415 Lexington Ave., New York 17, N. Y.



Cure these headaches with Rochester "dual-dial" GAUGES!



One sure way to avoid the headaches caused by faulty gauges is to insist on rugged Rochester "DUAL-DIALS." Their solid, leakproof construction eliminates unnecessary service calls, gives long-life dependability and assures complete customer satisfaction.

Why not profit by these outstanding "Dual-Dial" features

- Solid head
- Pressure tight
- Easy to install
- Easy to read
- Permanent magnetic indication
- Underwriters' listed

Over 2½ million "Dual-Dials" have already proved their dependability in service. Stocked by leading wholesalers for all standard basement oil burner storage tanks with 1½" and 2" flanges. *ORDER TODAY!* Rochester Manufacturing Company, Inc., 8 Rockwood Street, Rochester, N. Y.

Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS GAUGES AMMETERS

ROCHESTER DEPENDABLE ACCURACY GAUGES

PUMP WITH Magnaflow... IT WON'T LEAK!

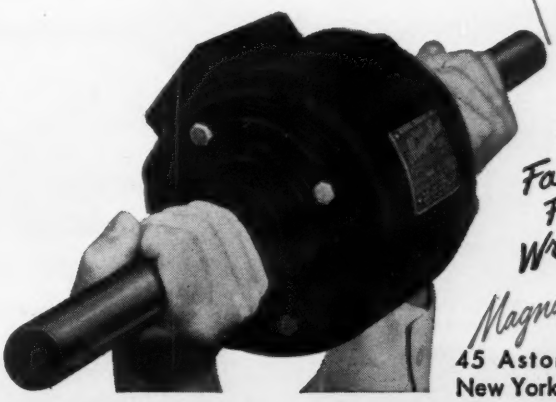
That is a Pump Guarantee . . .
Worth thousands to you . . .
Backed by 100% replacement . . .
Proved by hundreds of contractors . . .
Founded on a basic design difference.

Magnaflow

Leak-proof design is only one of eight distinctive Magnaflow advantages. For example, because of sealed-in U. S. Graphite bearing, Magnaflows need no oiling. Similarly, no other circulator has, "Only One Moving Part" . . . or features stainless steel pumping chambers in all models . . . or fits into 2/5 of a cubic foot with room to spare . . . or mounts at any angle.

Magnaflow

. . . and man! You should just see a Magnaflow *pump!*



For Fact Folder Write Magnaflow
45 Astor Place
New York 3, N. Y.

THE SIMPLEST PUMP YOU EVER SAW

K. C. Oil and Gas Symposium told U. S. produces most Oil

"AMERICANS ARE LIVING IN THE 'AGE OF ENERGY' with citizens of the United States using ten times as much mechanical energy per capita as the people of the rest of the world," Dr. Richard J. Gonzalez, director of the Humble Oil and Refining Co., Houston, Tex., said in a speech before a combined luncheon meeting of the Oil Men's Club of Kansas City and persons attending a one-day Symposium on Oil and Gas, sponsored by the School of Law, University of Kansas City, May 16.

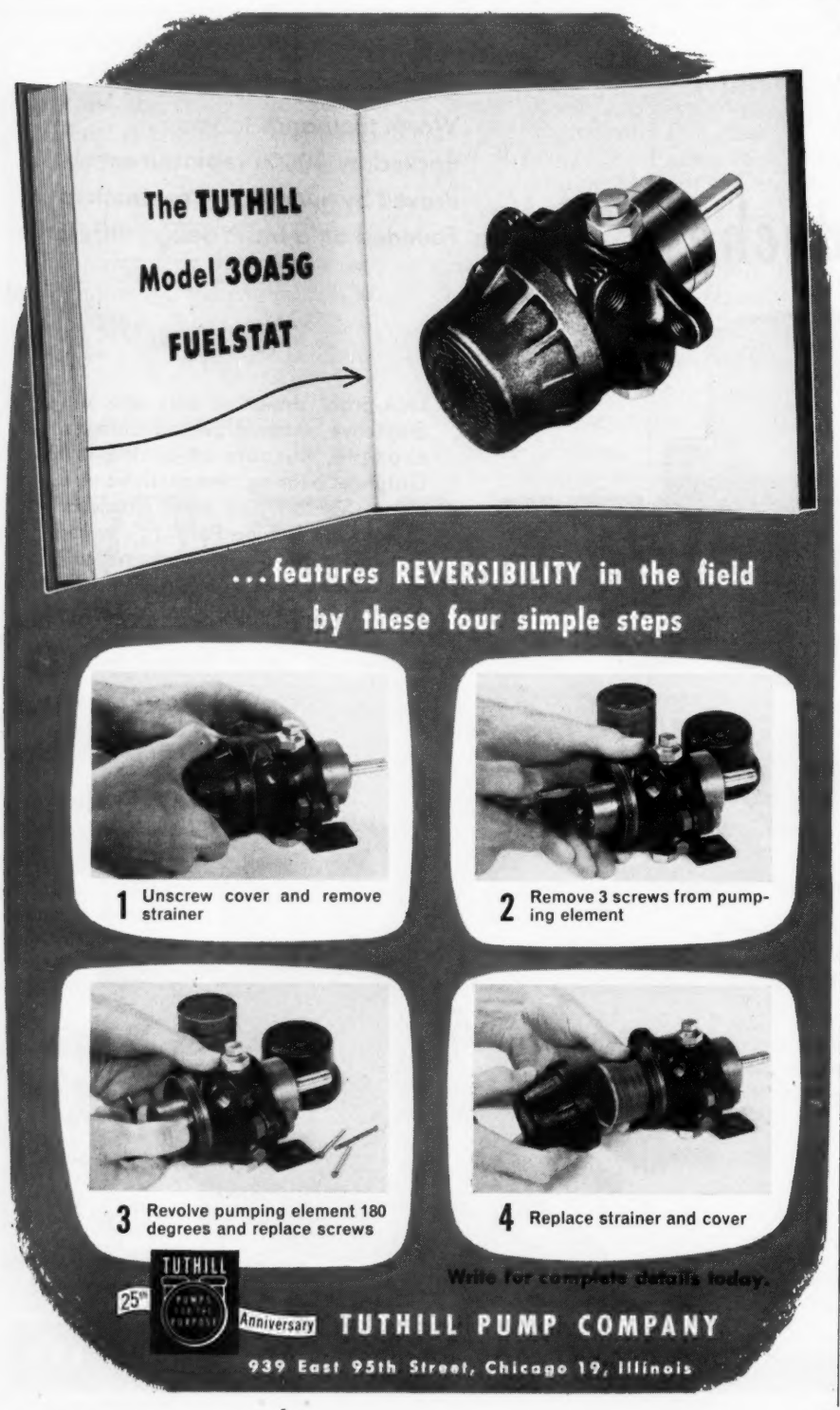
"Our great advantage in energy over the rest of the world," Dr. Gonzalez, who is chairman of the economics advisory committee of the Mid-Continent Oil and Gas Association, said, "has come particularly from the remarkable development of oil and gas production." He pointed out that the United States has produced to date about two-thirds of all the oil produced in the world.

Dr. Gonzalez, speaking at the School of Law building, said:

"In the United States we use daily two gallons of petroleum products per person, compared with an average of one-tenth gallon in the rest of the world. That is to say, we use 20 times as much petroleum per person. In 1951 our domestic petroleum consumption of nearly two and a half billion barrels represented about 60 per cent of the total for the world."

The speaker declared that since 1920, oil and gas have supplied all of the increase in energy used in the United States.

Dr. Gonzalez upheld the percentage depletion tax provisions as "fair, sound and necessary" and said many criticisms are due to the erroneous idea that oil production is a fabulously profitable business. He said that newspaper stories and movies help foster this idea by paying attention to the most successful individuals without mentioning the average operator in the petroleum industry or the innumerable losses that occur each day.


The TUTHILL
Model 30A5G
FUELSTAT
...features REVERSIBILITY in the field by these four simple steps
1 Unscrew cover and remove strainer
2 Remove 3 screws from pumping element
3 Revolve pumping element 180 degrees and replace screws
4 Replace strainer and cover
Write for complete details today.
25th Anniversary
TUTHILL PUMP COMPANY
939 East 95th Street, Chicago 19, Illinois

Chicago Group forms Gas Heating Division

A MEETING of the Chicago Oil Burner Association, Chicago, Ill., held on March 17, voted to form a Gas Heating Division of C.O.B.A. Al Bennett, Waterman-Waterbury distributor, explained to the members that Peoples Gas Light and Coke Co., the local public utility, had asked him to transmit a request that the division be organized. Peoples said they would then list members of the division as qualified installers to whom they could refer purchasers who asked the utility to recommend firms to install gasburners.

The utility has been cautious in recommending installers whom they felt might not be capable of doing a workmanlike job and actually discovered that its present list was not adequate. It recognized that COBA members have been installing oilburners for years and have the technical background that enables them to qualify as experts. More recently, a number of the companies have added gas-heating equipment to their lines.

NOW...SEE HOW TO REDUCE COSTLY OIL BURNER SERVICE CALLS

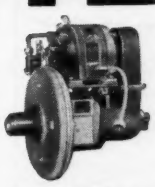
TRY THIS PLAN Install *ONE* **REXOIL** . . . and *see for yourself what real oil burner value it is. SEE how* it cuts costly service calls . . . *SEE how* much it saves on installation costs . . . *SEE how* happy your customer is with **REXOIL's** economy, its quiet, quick heat, and its efficiency . . . *SEE how your profits will climb.* Yes, **REXOIL** offers all these, and more. But the only common sense method for you to make sure of these facts is *to try one* ***REXOIL*** *for yourself.* Order just one burner, try it and prove its dependability for yourself.

WRITE TODAY . . . ORDER ONE REXOIL

REXOIL

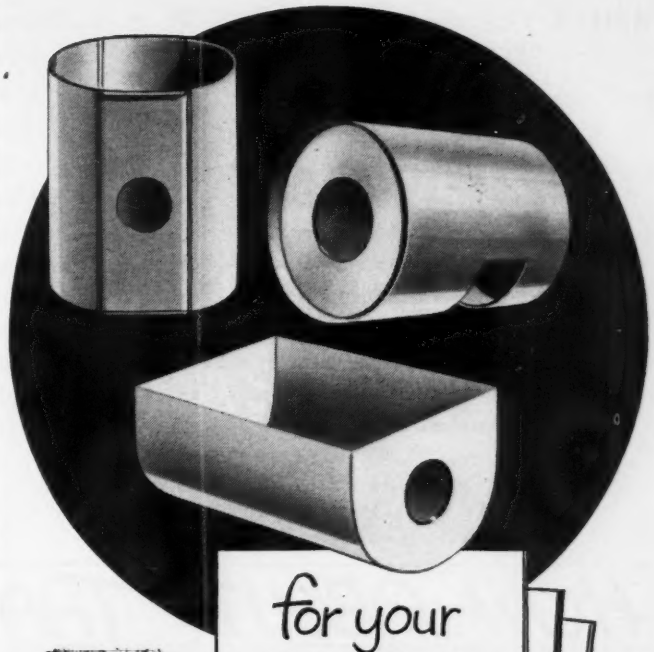
Residential, Commercial and Industrial Oil Burners for #2 oil

Furnace and Boiler Units



Horizontal Rotary Oil Burner for Heavy Oils

REIF-REXOIL, INC.
37 CARROLL STREET BUFFALO, N. Y.



for your

COMBUSTION CHAMBERS

HEAT-RESISTING

STEEL

SHEARED TO SIZE

If you are using or contemplating the use of heat-resisting steels for combustion chambers for oil burner furnaces, we are specialists in producing these types of steels.

Whether you are a large or small user of these steels, our steel making facilities can offer exceptional service by especially shearing to your specified combustion chamber steel blanks, or multiples thereof.

1 *More quiet burner operation*
2 *Cleaner heat*
3 *Better temperature control*
4 *Considerable savings on fuel costs*

Write us for additional information

ENGINEERING B-W PRODUCTION

Ingersoll STEEL DIVISION
BORG-WARNER CORPORATION
310 South Michigan Avenue, Chicago 4, Illinois
Plant: New Castle, Indiana

ASHVE Chapter hears Talk on heating Costs

THE INSTALLATION COST of a steam or hot water heating system in a small residence is competitive with the cost of a forced warm air system if means for heating domestic hot water are included with each system, J. D. Pierce, chief engineer, Vulcan Radiator Co., stated before the members of the Illinois chapter, American Society of Heating and Ventilating Engineers, Chicago, Ill., recently. Mr. Pierce explained his remark by citing a specific installation — a residence located in New England and having a heat loss of 43,500 Btu per hr. The structure includes a combination living and dining room, three bedrooms and bath on the first floor and a full basement. Heat loss calculations were made by a number of contractors using several standard calculation procedures and the estimated loss figures checked very closely. In addition, contractors submitted bids for the complete installation of a heating system as follows:

HOW ABOUT THAT?
AT THE LOCAL MEETING OF THE ASSOCIATION, CHEDDAR YELLS LOUDEST AGAINST PRICE-CUTTERS!
HOLD YOUR BREATH, GENTLEMEN, FOR I'M ABOUT TO TURN MYSELF LOOSE ON THAT LOW, MISERABLE, YELLOW-BELLIED SPECIE OF VERMIN KNOWN AS PRICE-CUTTERS WHO ARE RUINING OUR GRAND AND GLORIOUS INDUSTRY!! THESE @x••!!#!! CRAWLING REPTILES IN HUMAN FORM SHOULD BE EXTERMINATED OR WE'LL ALL WIND UP IN THE POORHOUSE! THE TIME IS COMING WHEN THEY'LL HAVE TO ANSWER WITH THE BEST BLOOD IN THEIR BODIES!! I WONT REST... I WON'T SLEEP...UNTIL I'VE WADED IN THE BLOOD OF THESE ENEMIES OF OUR NOBLE BUSINESS...OR SPOUT BLOOD OUT OF ALL MY ARTERIES!! MOREOVER, BLA..BLA...BLA...
BUT WHEN CHEDDAR IS BACK IN HIS OWN BACKYARD.... OH, WELL! A GUY'S GOTTA MAKE A LIVING.... DON'T HE?
YOUR PRICES ARE HIGH! BUT, IF YOU GIMME' A BREAK, I'LL BUY AN OIL BURNER HERE!
I DONT CUT PRICES, NEVER!! BUT...ER... SINCE YOU'RE A NEW CUSTOMER...SHH-HH-.. YOU CAN HAVE ANY BURNER...SHHH- AT HALF-PRICE! I'LL TREAT YOUR FRIENDS RIGHT, TOO..... BUT REMEMBER....SH-H-H-MUM'S THE WORD!!
OIL-BURNERS
H.T. ELMO
SEND IN YOUR CARTOON IDEA FOR ILLUSTRATION! YOU WILL RECEIVE CREDIT AND THE ORIGINAL DRAWING!

Baseboard radiation (series loop) system designed for 215°F. water temperature, $1,251.

Baseboard radiation system (split into 2 series loops) designed for 180°F. water temperature, $1,375.

One-pipe steam system with cast iron slim tube radiation, $1,200.

One-pipe hot water system using cast iron slim tube radiation and designed for 180°F. water temperature, $1,356.

Two-pipe reversed return hot water system using copper convectors and designed for 180°F. water temperature, $1,448.

Forced warm air, oil-fired heating system, $1,220.

The first five systems included tankless hot water heaters whereas the warm air system did not include any provision for domestic hot water.

Citing a number of other examples, Mr. Pierce said that in his opinion safety factors in designing residential hot water heating systems are unnecessary, as the actual water temperature hardly ever reaches the design temperature. He recommended that the design procedures of the ASHVE, the Heating, Piping and Air Conditioning Contractors National Association or the Institute of Boiler and Radiator Manufacturers be carefully followed.

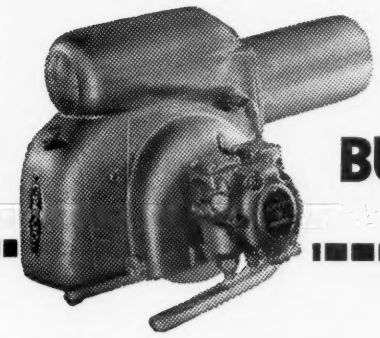
In reply to a number of questions, Pierce stated that the series system of baseboard radiation does not present a balancing problem. He pointed out that in the 43,500 Btu heat loss house a temperature drop of only 12° was found in the series loop baseboard system (measured at boiler inlet and outlet) when the outside temperature was about 20°F. He also indicated that while wall streaking with baseboard units was, of course, influenced by the design of the baseboard cover, no serious problems of this sort would be encountered if temperatures were held 200°F. or less.

Ozark Empire Oil Men hear two OIIC Officials

RAY GREMP, JR., St. Louis educational vice-chairman of the Oil Industry Information Committee, American Petroleum Institute, New York,

Eliminate return service calls
and increase your profits . . .

HERCO *Residential*



OIL BURNER

You can eliminate those profit-stealing return service calls when you install the HERCO RESIDENTIAL. Because this Burner is engineered on sound principles throughout, with protected motor and electrical parts, it will operate for years with a minimum of check-ups. The service free operation of a HERCO RESIDENTIAL means satisfied customers . . . your best reputation builders!

Two Service Features You'll Appreciate:

► So accurately made that parts can be interchanged from other HERCO models.

► Every HERCO is factory-fired and pretested before it is shipped to you.

DON'T STAKE YOUR REPUTATION ON AN INFERIOR BURNER WHEN HERCO IS THE "LAST WORD" IN QUALITY

Send for these three folders, describing in detail the HERCO family of fine oil burners. If you are interested in selling dependable burners with a profit you can pocket for keeps (without costly service calls), then send coupon below, today.

HERCO
The Oil-Thrifty
OIL BURNER

HERCO OIL BURNER CORPORATION
LANCASTER, PA.

Dear Sirs:

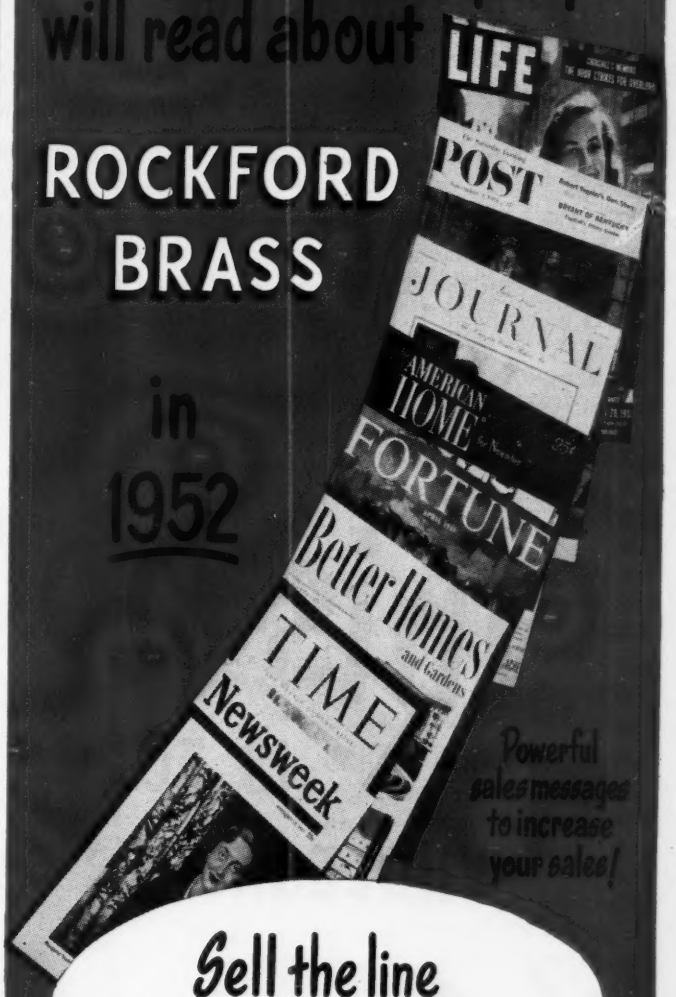
I am interested in learning more about the HERCO RESIDENTIAL and other HERCO models. Please send me the three dealer folders. I understand that I am under no obligation.

Name .....

Address .....

City .....

Over 92,000,000 people will read about ROCKFORD BRASS in 1952



Powerful sales messages to increase your sales!

Sell the line the consumer knows!

Millions of readers of leading National Magazines are being referred to their licensed plumber in the 1952 Rockford Brass Works advertising campaign. Consistent, monthly messages to build sales for the licensed plumber.

Here is a profitable, volume building line — consumer accepted and preferred — advertising to build your sales — backed with over 60 years of experience in manufacturing Quality Plumbing Brass products and sold through plumbing wholesalers.

Tie in with this program for new customers and greater profitable volume. Write for complete catalog information and "sell the line the consumer knows".

QUALITY PLUMBING BRASS SINCE 1890

Rockford BRASS WORKS

ROCKFORD · ILLINOIS

N. Y., addressed the Oil Men's Club of the Ozark Empire, Springfield, Mo., at its monthly meeting in the Seville Hotel, Springfield, on May 12.

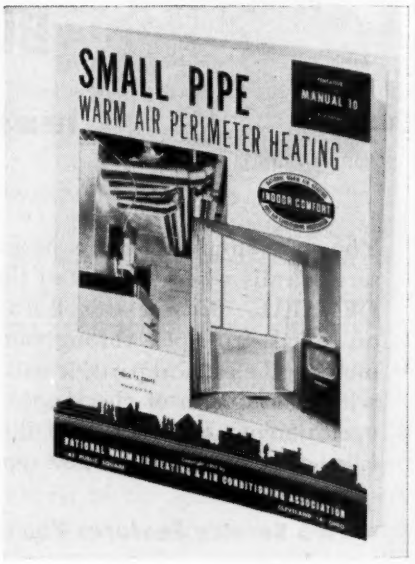
Gremp, public relations representative for the St. Louis sales division, Standard Oil Co. (Indiana), discussed plans for expansion of the OIIC educational program in schools of Missouri.

The Oil Men's Club also heard James O. Kemm, Kansas City district representative of the OIIC, who explained educational materials about the petroleum industry which are used as supplementary teacher aid materials in connection with the OIIC school program.

Perimeter Heating Manual published by warm air Group

A SMALL PIPE WARM AIR PERIMETER HEATING GUIDE has just been published by the National Warm Air Heating and Air Conditioning Association, Cleveland 14, O. Identified as Manual 10, this book is a tentative manual for use in designing and installing low velocity heating systems.

The material presented in the new 24-page guide is based on the best industry experience and data available. The purpose of the tentative manual is to outline standards for heating contractors desiring to install small pipe systems and for inspecting agencies to use as a basis for acceptance of installations.



Two types of small pipe systems are described in tentative Manual 10. These are the individual pipe system and the extended plenum system. The design and installation suggestions given cover the use of small pipe perimeter heating in one and two-story houses with full or partial basements and in houses constructed over crawl spaces. The system is adaptable to large houses as well as small. In larger houses where pipe runs may be too long for practical purposes, two or more separate heating systems can be used. The new manuals suggest that the use of more than one system in larger houses is desirable in order that zone control can be provided.

OHA of Maryland hears noted oil Man speak

A. H. CHAPMAN, vice-president in charge of Government Relations, Arabian-American Oil Co., spoke to the members of the Oil Heat Association of Maryland, Inc., Baltimore 1, Md., May 20 at the Stafford Hotel in Baltimore.

This book IS FOR WHOLESALERS ONLY!

If you as a wholesaler would like to sell more oil burners — make more profits the Nu-Way, don't hesitate even one minute. Fill in the coupon and get your personal copy by return mail!

THE NU-WAY CORPORATION, Dept. B-1
Rock Island, Illinois

YES — I'm interested in more profits the Nu-Way. Rush me complete details.

NAME _____

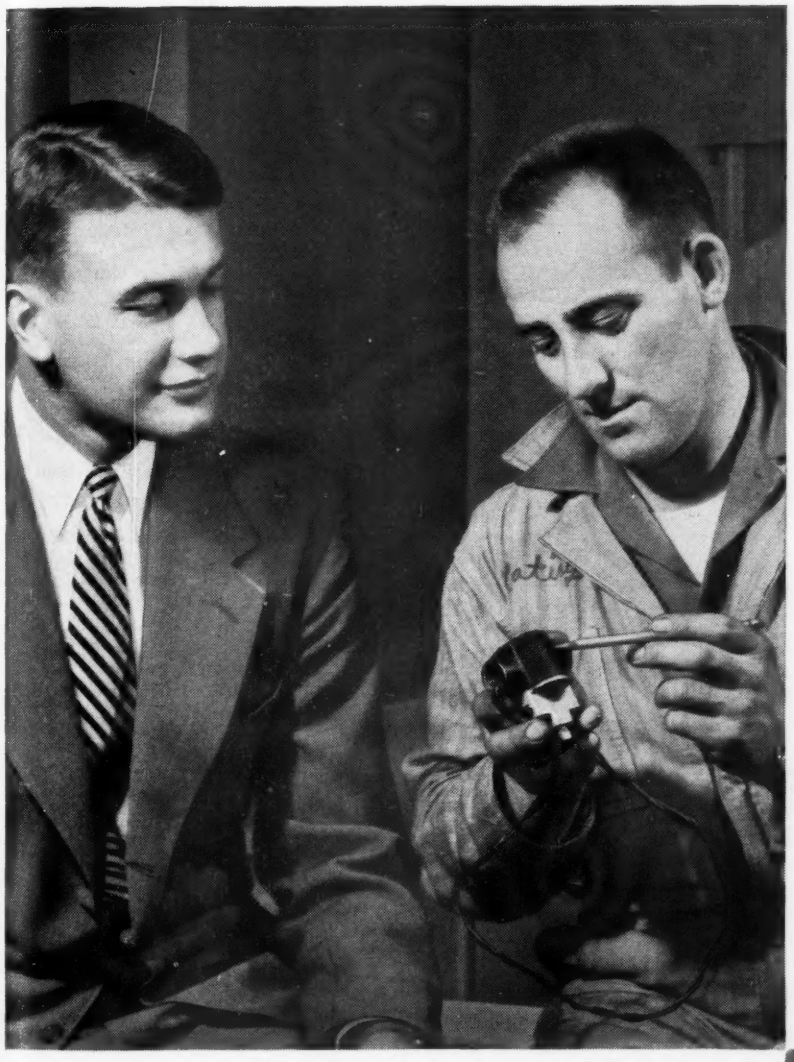
FIRM NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

"There's nothing like it for fast, clean starts and quick cut-offs"

. . . says Steve Nagy, Painesville, Ohio, Dealer, about the Honeywell Delayed-Opening Oil Valve



Dealer Steve Nagy, right, talking to Honeywell representative Jack Daniels

"Ordinarily, I try out new products like this on my own burner first. You see, I've got a pretty good reputation in this town—I guarantee my work, just as Honeywell guarantees their controls—and I don't like to ask my customers to take a chance with a product I can't underwrite 100%.

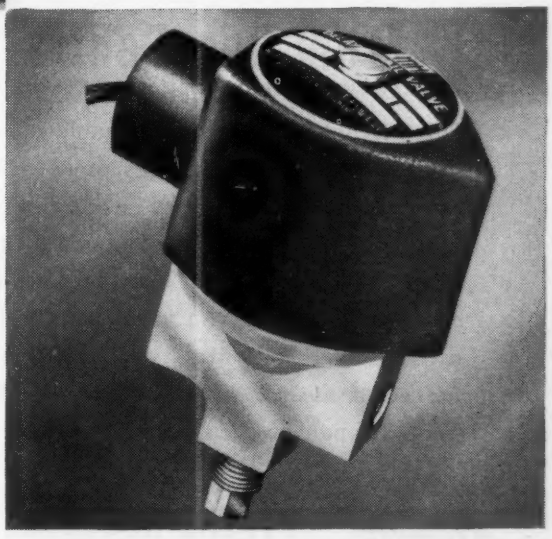
"But when the Delayed-Opening Oil Valve came along, someone asked me to put one in before I had a chance to try it myself. Although it was against my usual practice, I went ahead with the job, because I have a lot of faith in Honeywell products.

"The results of that first job—and the many that followed—were more than satisfactory. My customers were pleased and I was pleased because it improved burner performance all around. There is nothing like it for fast, clean starts and quick cut-offs.

"Now I install Honeywell Delayed-Opening Oil Valves on every oil burner job I put in. It's the only product on the market of its kind, and I wouldn't be without it.

"It's saved me money on service calls and made customers more satisfied with their heating plants, too. Besides, it gives me a nice extra profit."

Another Plus-Profit Idea From Honeywell!



Use the Honeywell Delayed-Opening Oil Valve On Your Installations!

The Honeywell Delayed-Opening Oil Valve virtually eliminates the last trace of smoke at starting and stopping points, cuts down on service calls because of improved, all-around burner operation. Added cleanliness reduces the need for cleaning the heating unit, promotes better efficiency, and decreases customers' fuel bills. It can easily be installed on existing high pressure oil burners. For complete information, call your local Honeywell office. Or write Honeywell, Dept. FH-6-46, Minneapolis 8, Minnesota.

MINNEAPOLIS **Honeywell**

First in Controls

Chapman, who for many years worked in engineering and managerial capacities in virtually all foreign oil producing countries, served the government in the early 1940's as Director of Foreign Production, Petroleum Administration for War.

❖

Catalogue of oilburner Manufacturers

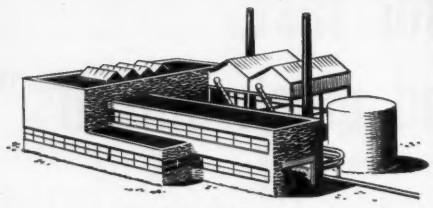
(*Begins on page 66*)

Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Macleod Co., Cincinnati 22, O.
Major Oil Burner Co., Philadelphia 22, Pa.
Michigan Tank & Heater Corp., Dearborn, Mich.
National Home Eqpt. Co., New York 7, N. Y.
Nu-Way Corp., Rock Island, Ill.
Pacific Oil Co., Fall River, Mass.
Petro Div., Cleveland 11, O.
Preferred Utilities Mfg. Corp., New York 23, N. Y.
Ray Oil Burner Co., San Francisco 12, Calif.
Reif-Rexoil, Inc., Buffalo 3, N. Y.
Scott-Newcomb, Inc., St. Louis 19, Mo.
Sigwald Eng. Co., Minneapolis, Minn.
Shepard Heater Co., Terre Haute, Ind.
Tru-Heet Co., Trenton, N. J.
U. S. Radiator Corp., Detroit 26, Mich.

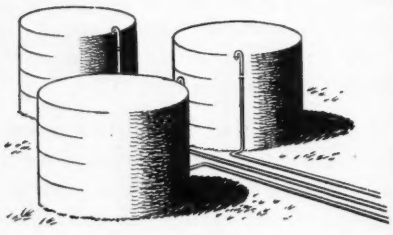
Storage, direct, pot burner
Allen Mfg. Co., Inc., Nashville 1, Tenn.
American Gas Machine Co., Albert Lea, Minn.
Bastian-Morley Co., Inc., LaPorte, Ind.
Coleman Co., Inc., Wichita, Kan.
Day & Night Div., Monrovia, Calif.
Delco Appliance Div., Rochester, N. Y.
DeSoto Oil Burner Co., York, Pa.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Duo-Therm Div., Lansing, Mich.
Evans Product Co., Plymouth, Mich.
ExCel Co., Dowagiac, Mich.
J. L. Gillen Co., Detroit 28, Mich.
Hanson-Gates Mfg. Co., Inc., Reading, Mass.
Holland Furnace Co., Holland, Mich.
Hotstream Heater Co., Cleveland, O.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Mfg. Co., Palisades Park, N. J.
H. C. Little Burner Co., Inc., San Rafael, Calif.
Michigan Burner Co., Detroit 28, Mich.
Michigan Tank & Heater Corp., Dearborn, Mich.
Perfection Stove Co., Cleveland 4, O.
Piatt Products Corp., Lansing 4, Mich.
Therm Gas Generator Co., Inc., Seattle, Wash.
Viking Mfg. Corp., Cleveland 14, O.

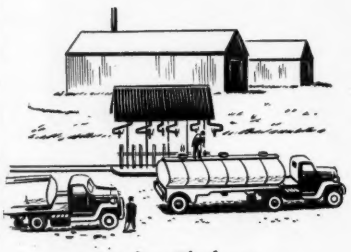
Storage, direct, range burner
Safety Products Co., Brockton, Mass.
Therm Gas Generator Co., Inc., Seattle, Wash.
Tower Mfg. Co., Boston, Mass.
Victor Oil Burner Mfg. Co., Hartford, Conn.

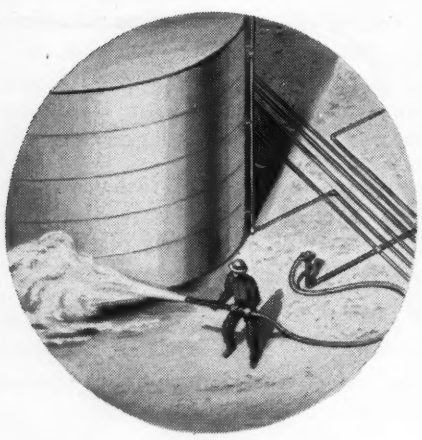
Storage, direct, wall-flame, rotary burner
Timken Silent Automatic Div., Jackson, Mich.
Toridheet Div., Cleveland 2, O.

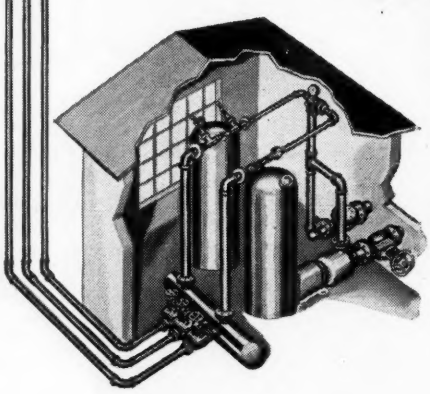

Warehouses

Garages


Storage Tanks


Loading Platforms


Spill Fires


Central Foam-making System

Complete Plant Fire Protection From One Central System

This Pyrene* installation will enable you to instantly feed large quantities of air foam to any predetermined point. Pipelines run from centrally located proportioning tanks to all your fixed fire hazards. Simply by turning the proper valve, one man can quickly start the air foam feeding. Connections, strategically placed, enable you to couple in a hose and playpipe for extinguishing spill fires, warehouse fires, loading platform fires, and the like. Protect your investment this easy way. Write for name of nearest Pyrene jobber today.

**T.M. Reg. U.S. Pat. Off.*

Pyrene AIR FOAM

PYRENE MANUFACTURING COMPANY
695 Belmont Ave. Newark 8, New Jersey
Affiliated with C-O-Two Fire Equipment Co.

Manufacturers' Activities

Robertson Heating Co. holds dealer Schools

THE ROBERTSON HEATING SUPPLY CO., Alliance, O., recently held a series of schools on "Oilburner Installation and Service," in which 378 dealers participated. The talks were supplemented by "live" demonstrations using cut down units which were fired. Tank locations, nozzle sizes and spray angles, electrode settings, control locations and service, and burner adjustment were covered.

The principal speakers at these meetings were C. L. Grandstaff and E. H. Morris of the C. A. Olsen Mfg. Co.

The first meeting was held February 26 at Canton, Ohio with a meeting for the Canton Branch of Robertson Heating Supply and was continued on successive nights with meetings for the Youngstown, Alliance, Steubenville and Zanesville branches.

Sid Harvey service Lectures in New England OHI Schools

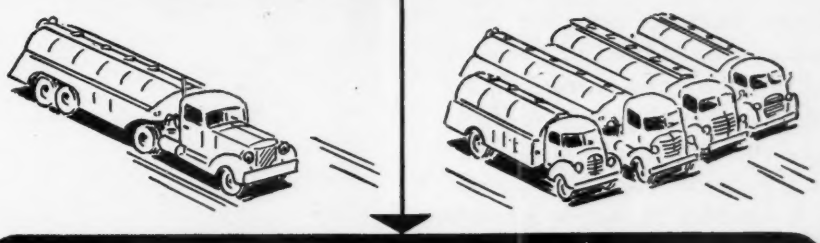
A SERIES OF 10 "TROUBLE-SHOOTING" LECTURES, by executives of Sid Harvey, Inc., Valley Stream, N. Y., are scheduled for the oilburner service schools conducted by the Department of Education, Oil Heat Institute of New England in Worcester and Springfield, Mass., Hartford and New Haven, Conn. and Providence, R. I. A similar series of schools which were conducted by OHI were completed in March.

The first Sid Harvey lecture in the series, already held on April 21 in Worcester and repeated in other cities on successive evenings, was conducted by Herb Lindtveit, head of the relay rebuilding department, on "Relay Trouble Shooting."

The next lecture, held on May 19 in Worcester and repeated in other cities, was on the subject "Trouble Shooting Fuel Units" and was conducted by Ted Rojecki, formerly head of the pump rebuilding department and now manager of Sid Harvey's Hempstead, N. Y., store.

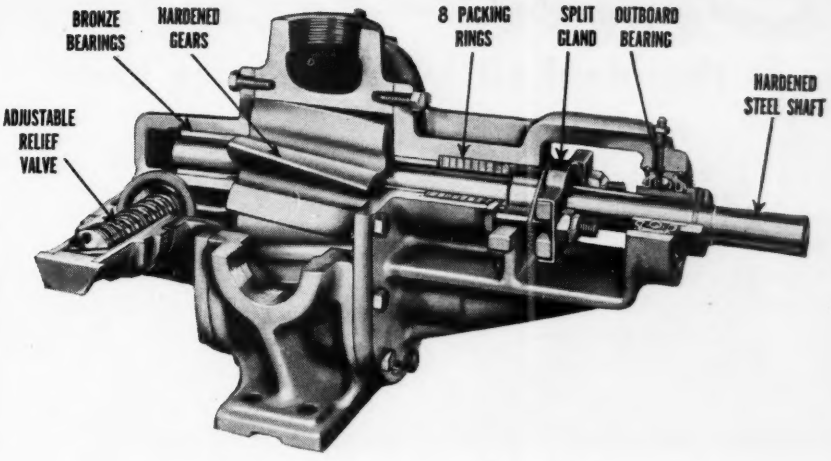
Rojecki also conducted the last series of lectures in June on "Trouble Shooting the G.E. Oil Furnace."

ONE truck or a **FLEET**



you'll gain more with

ROPER 3600 SERIES **PUMPS**



In seven capacities from 40 to 300 G.P.M.

Easy to install and operate . . . dependable to reduce down-time, you'll find the Roper Series 3600 Truck Pump a worthwhile investment in necessary equipment. This is a complete unit, ready for hook-up on any type of drive, and for all conditions of piping and mounting.

- High lead bronze bearings — deep packing box with 8 split ring packings.
- Pumping gears run smoothly in axial hydraulic balance.
- Adjustable relief valve assures full capacity when pumping . . . permits nozzle shut off without stopping pump.
- Compact design, lightweight . . . ideal for new installations or for replacement.

send for full facts today!

ROPER Rotary Pumps

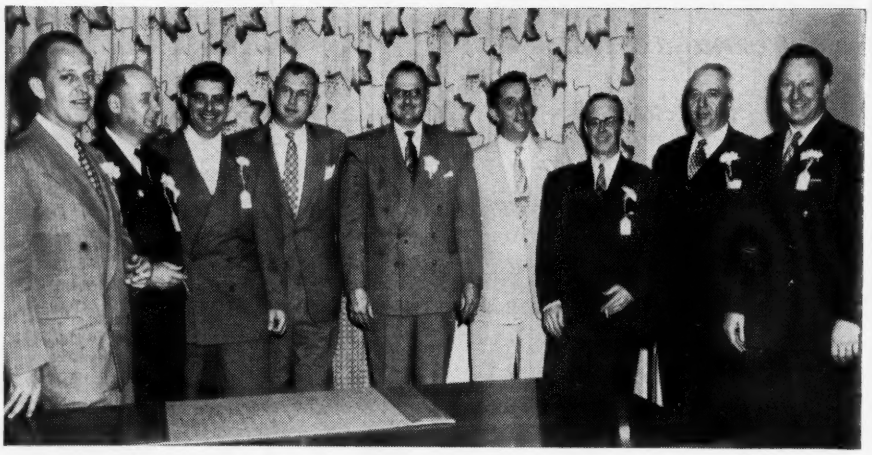
GEO. D. ROPER CORPORATION
766 Blackhawk Park Avenue, Rockford, Illinois

☐ *Please send Catalog*
☐ *Have Roper Representative Call*

Name.....
Address.....
City.....
Company.....

Renick & Mahoney opens Headquarters formally

A THREE-DAY open house and equipment exhibit, attended by leading oil and equipment men, marked the formal dedication of the new headquarters occupied by Renick & Mahoney, Inc., 380 Second Ave., New York 10, N. Y. On May 10, August Schramm, president, his brother, Arthur, treasurer of the company, and their wives, greeted the first guests. For the rest of that afternoon visitors were shown the offices and warehouse which the company opened recently.



The Renick & Mahoney *sales organization, left to right: August Schramm, president; Ernest Trombley, William Maurer, Daniel McCarthy, Lloyd White, Neil Zarcone, Curtiss Main, Johannes Kuhland and Arthur Schramm, secretary-treasurer.*

On May 12 and 13 oil men attending the ESPA annual meeting in New York were special guests of the company.

Renick & Mahoney is a leading petroleum equipment distributor in the East and for 25 years had been located at a downtown New York site. The move to a ground floor location at a much more accessible point was made to facilitate prompt handling of orders and correspondence, with warehouse facilities at the rear of the building providing ample room for equipment storage. Off-the-street loading bays expedite receiving and dispatching shipments.

Illinois Iron & Bolt buys Comfort Equipment Corp.

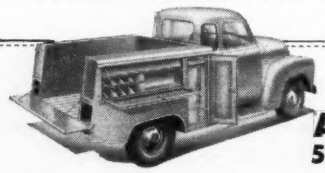
AS PART of its long range expansion program Illinois Iron & Bolt Co., Carpentersville, Ill., has purchased the Comfort Equipment Corp., Chicago, Ill. With this merger, the firm's line now includes gas, oil and coalfired warm air furnaces, oil and gas conversion burners, air-circulating systems, and a complete range of Freeman stokers up to 1200 lbs. per hour capacity.

The Illinois Iron & Bolt Co. has also introduced new comfort air-circulating systems for low-cost packaged heating.

says **MR. FRANK COAN**
COAN BROS., NATICK, MASS.

"We like the Service-Master Body because it enables us to carry all tools and materials we'll need for a day's work. Everything stays in order, too . . . easy to inventory before we leave for the job . . . easy to find when we get there. In a year's time, Service-Master has saved us enough man-hours to literally pay for itself."

If your present truck equipment isn't adequate for your work, why not get the full story on the efficient Service-Master Body? Just clip the coupon below . . . paste it on a post card . . . and mail it. You're under no obligation, of course.



McCABE-POWERS AUTO BODY COMPANY
5900 N. BROADWAY • ST. LOUIS 15, MO.

Please send me literature and complete information about Service-Master

Name _____

Company _____

Address _____

City _____ Zone ____ State _____

CDE

Cleaver-Brooks Hev-E-Oil Distributors hold Meetings

HEV-E-OIL burner regional dealer meetings, sponsored by Cleaver-Brooks Hev-E-Oil Burner Distributors, are taking place in various cities along the eastern sea board and are being conducted by Frank M. Wymbs, Sr., vice-president, Cleaver-Brooks Hev-E-Oil Burner Distributors, Henry M. Wymbs and Frank F. Wymbs, Jr.

The schedule of sales meetings yet to be held are as follows: June 10: Daytona Beach, Fla. June 15: Miami, Fla. June 20: St. Petersburg, Fla. June 25: Orlando, Fla.

During July and August seasonal meetings will be held at Albany, Syracuse, Rochester, Buffalo, and Schenectady, New York as well as Toronto, Thorold, and Niagara Falls, Ontario, Can.

Monarch Mfg. names Canadian Outlet

APPOINTMENT of an exclusive Canadian sales agent has been revealed with the naming by Monarch Mfg. Works, Inc., Philadelphia of Canadian General Filters, Ltd., Toronto, Canada. The firm will distribute the complete line of Monarch oilburner accessories in the territory east of the Rockies.

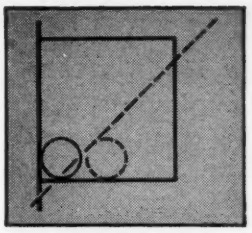
It will maintain jobber stocks in Toronto, while manufacturers' supplies will continue to be shipped direct from Philadelphia.

American-Standard opens heating School in Buffalo

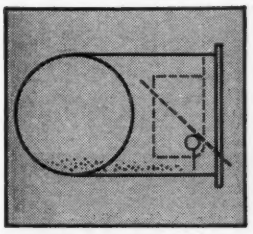
A HEATING AND COOLING SCHOOL in Buffalo, N. Y., has been started by American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa. Courses will follow a plan of study now being devised by Clyde A. McKeeman, former college professor, who was named to head the technical school.

First entrants to the school will be American-Standard sales trainees. Their attendance will help Professor McKeeman determine the most effective program of study. Eventually, it is planned to make this training available to the industry's wholesalers and retailers who will be offered the courses free of charge.

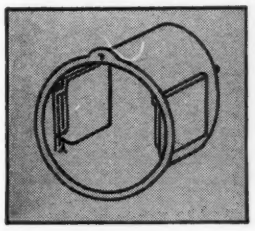
The aims of the new school are to



ROLLING TYPE HINGE PIN means no friction, no binding, no need for oiling, no fear of corrosion. Off-Center Gate Mounting lets draft operate on a greater effective area.

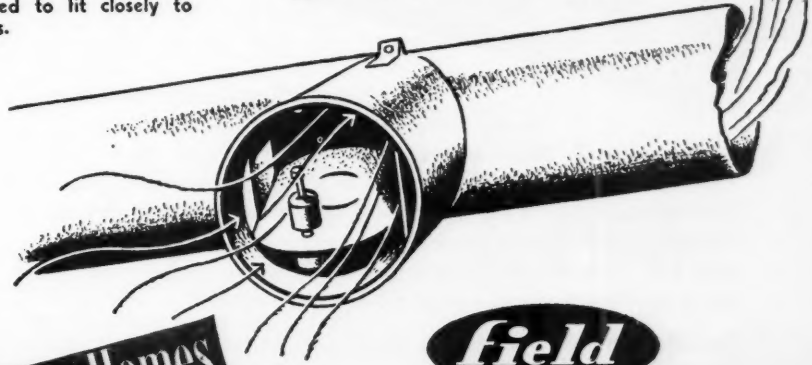


EXTENDED HOUSING places gate well outside the flow of fouling soot and gases. Warping or binding of gate are eliminated assuring full sensitivity.



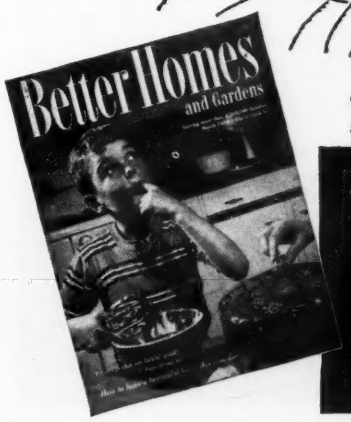
SIDE WINGS mean greater accuracy as they allow the area of the opening through the control to increase uniformly. Gate is shaped to fit closely to wings.

don't send a boy on a man's errand



field

The Draft Control that's nationally advertised in BETTER HOMES & GARDENS



field CONTROL DIVISION

H. D. CONKEY & CO., MENDOTA, ILL.

AFFILIATES:

CONCO BUILDING PRODUCTS, INC.
BRICK • TILE • STONE

CONCO MATERIALS HANDLING Div.
CRANES • HOISTS

help solve difficult field problems and give a better understanding of advanced heating and cooling principles, both of which should lead to better sales, service and installation practices.

The classes will be conducted at the American-Standard's Buffalo sales office, which has undergone extensive renovation to provide the school with modern facilities.

L. J. Wing Co. Reception for Employes and Families

THE EMPLOYES AND THEIR FAMILIES of the L. J. Wing Mfg. Co., Linden, N. J., were invited to an "Open House," April 18, where a reception was held, followed by a tour of the manufacturing departments and offices. Later a buffet dinner was served and in the evening there were refreshments and dancing.

A feature of the occasion was the presentation of service awards to 66 employes who have been ten years or more with the company by H. S. Wheller, president of the company, who also received one himself, for having just completed 50 years with the company. C. H. Smith, secretary of the company, also received gifts from the employes and officers.

Harry S. Wheller, *center, president and general manager, L. J. Wing Mfg. Co., receives silver tray from Walter W. Wilson, left, treasurer, and Charles H. Smith, secretary, commemorating his 50th year with the Wing organization.*

Twenty-eight of the Wing employes have completed 10 years with the company, 12 have completed 15 years, 10 have completed 20 years, 11 have completed 25 years, one has completed 30 years, two have completed 35 years, one has completed 40 years and one has completed 50 years. Following the presentations, Wheller delivered a talk on the history of the company and its achievements.

Armstrong dealers from Ohio attend annual sales Meeting

WARM AIR HEATING DEALERS from central Ohio assembled at the Columbus plant of Armstrong Furnace Co., Columbus, O., recently to attend the annual sales meeting of the Ohio Furnace Co., Columbus distributor for Armstrong heating equipment.

Adam J. Pataky, general manager, Ohio Furnace Co., opened the meeting with a discussion of the importance of product knowledge and the necessity of using the merchandising aids available to conduct a successful heating business.

D. H. Kinnan, Armstrong president, extended the official welcome. He emphasized the importance of adopting and following a sound merchandising plan both for the develop-

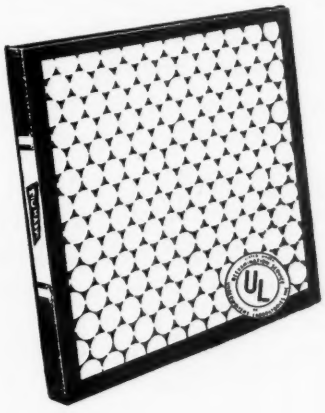
POSITIVE SELF-PRIMING
. . . STARTS WITHOUT PRIMING
. . . RUNS WITHOUT VENTING

Here's a centrifugal pump that's built to do multiple-duty . . . and do all jobs equally well. Because it handles liquid, air and vapor, the Roto-Prime Centrifugal excels in stripping, transferring and loading operations. By using Roto-Primes for such multiple service, savings of 30 to 50% in pumping equipment costs can be realized. And with their simple, trouble-free construction, Roto-Primes cut down servicing headaches and maintenance costs.

Furnished complete with base, electric motor, coupling, and mechanical seal. Write today for the complete Roto-Prime Centrifugal story . . . for pump facts you won't want to miss.

Gilbarco
Gilbert & Barker Mfg. Co. West Springfield, Mass., Toronto, Canada

SID HARVEY'S
GLASS AIR FILTERS



Smooth and easy to handle because they are made of extra long interlocked spun glass fibres, with no short ends to splinter your fingers.

Efficient too, because Sid Harvey's Glass AIR FILTERS are treated to catch the dirt without stopping the air flow.

Make your Replacements Now—with a Harvey Glass AIR FILTER, for lasting satisfaction.

SID HARVEY INC.
VALLEY STREAM, NEW YORK

Boston • Bridgeport • Mt. Vernon
Hempstead • Jamaica • Newark
Union City • Highland Park
North Philadelphia • West Philadelphia
Baltimore • Washington • Arlington

ment of prospects and the final closing of furnace sales.

H. G. Hays, assistant sales manager and H. C. Galleher, advertising manager, Armstrong Co., conducted a general discussion of the complete Armstrong line of gas, oil and coal heating equipment covering construction features and installation practice.

Galleher outlined the 1953 advertising and sales promotion plans. This year Armstrong will advertise in several national magazines and will have available various merchandising aids to help the promotion-minded dealer.

Winkler holds dealer Parleys to keep Retailer informed

THIRTY-SIX WINKLER DEALER MEETINGS sponsored by U. S. Machine Corp., Lebanon, Ind., were held the latter part of April and early May for the purpose of presenting current information regarding factory conditions, including production, shipments, and sales for the remainder of 1952.

These meetings were under the supervision of Winkler district sales managers, assisted by four factory representatives, Claude A. Potts, vice-president in charge of sales; Walter E. Blake, national sales supervisor; Robert C. Hulse, sales promotion manager, and Phil C. Kosch, sales training manager.

Meeting places were selected geographically, and dealers were invited to attend the one nearest them. With two exceptions, the programs were presented at night.

M-H factory Workers sit in on Firm's sales Meeting

AN INNOVATION in promoting employer-employee relations was sponsored by Minneapolis-Honeywell Regulating Co., Minneapolis, Minn., when 1800 production and engineering personnel were invited to become "Salesmen for a Day" and were shown a sales presentation previously given to road men in Atlantic City, Niagara Falls, Ont., Chicago and San Francisco to help them better understand the company's 1952 sales objectives.

The production, which was staged in a Minneapolis theater, had all the

SILENT STEEL SPLINES Will Not Nibble Out!

Pats. Pending

Replace spline couplings which have stripped out, loosened, or become noisy, with this heavy-gauge silent steel coupling. Guaranteed not to strip or loosen. Heavy-gauge steel prevents distortion.

Conventional set-screw couplings available in all lengths and bores.

MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

Our 25th Year

FLEXIBLE COUPLING MFG. CO.
8145 South Dobson Avenue
Chicago 19, Illinois

colorful trimmings. Standard theater tickets were issued and, of course, there were attractive usherettes. M-H salesman "Man of the Year" was presented to the audience and live "telecasts" of sales situations acted out behind a huge screen were made.

The highlight of the program was the projection on the screen of six nationally famous men who discussed advertising's place in the economics of the future and outlined the role advertising plays in business.

Cleaver-Brooks Co. Catalog describes Hev-E-Oil Burner

AN EIGHT-PAGE, two-color, illustrated catalog has been published by Cleaver-Brooks Co., Milwaukee 12, Wis., describing its complete line of Hev-E-Oil Burners varying in maximum capacities of from five to 60 gallons.

Featured in the catalog is the fact that the Hev-E-Oil Burner is designed to utilize No. 5 oil as well as light oils making it an efficient burner for both commercial and industrial uses.

In discussing the advantages of the Hev-E-Oil Burner, the Cleaver-Brooks catalog points out that it has automatic electric ignition, a low fire start, safety controls, low pressure atomization, automatic pressure lubrication and comes in a wide range of sizes.

Booklet to aid nozzle Sales published by Delavan Mfg. Co.

A SELLING AID BOOKLET, published by Delavan Mfg. Co., Des Moines, Ia., is designed to help oilburner dealers sell more replacement nozzles to their customers.

The illustrated leaflet tells the consumer why and how he can save money and get better burner performance by installing a new nozzle at regular intervals.

The leaflet is directed to "Mr. and Mrs. Home Owner" and can be used as a statement enclosure or presented by the serviceman at the time he is making a service call.

Bulletin covering Plibrico refractory Products Issued

A REFRACTORY BULLETIN entitled *Plibrico Refractory Products for Firebox & Other Heating Boilers* has been published by Plibrico Jointless Firebrick Co., Chicago, Ill. The bulletin covers the application of Plibrico monolithic linings to firebox and similar types of heating boilers.

The catalog describes air-cooled as well as solid refractory construction. The "Multi-Rib" steel base is featured as adapted to this type of boiler. Also included are complete engineers' specifications for the refractory lining and outside wall construction (either brick or steel) for boilers of this type.

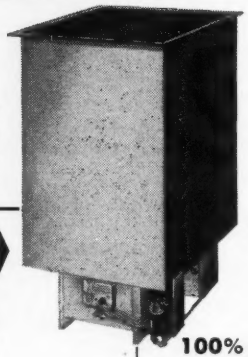
H-B Instrument Co. to move plant to larger quarters

H-B INSTRUMENT CO., will soon occupy its newly acquired plant at American and Bristol Sts., Philadelphia 40, Pa. The large plant will provide more space for the increased production of H-B products and will also give H-B more room to carry out its stepped-up program of research and development.

no duct installation

and automatic self-lighting operation make

H.C. Little oil floor furnaces



the really profitable units for you to handle!

QUICKLY, EASILY INSTALLED—EVEN IN HOMES WITHOUT BASEMENTS

Home owners appreciate the economical no duct installation and the H. C. Little advantages that provide uniform, whole-house heat!

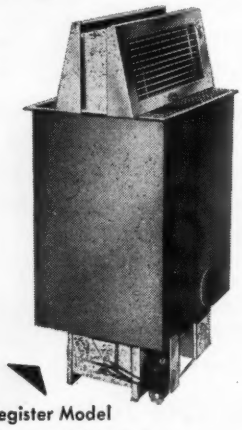
Standard Register Model
Two Sizes: 50,000 and 75,000 BTU heat output.
Special Shallow Floor Furnace with Standard Register available that is only 34" deep: 50,000 BTU heat output.

100% AUTOMATIC OPERATION—Patented vaporizing burner lights itself electrically, regulates itself—is thermostatically controlled—yet has no moving parts of any kind to wear or make noise!

PATENTED LOW-VOLTAGE IGNITION—takes the bother out of home heating—has no pilot light to waste fuel or make soot—no high voltage spark to cause radio or television interference.

PROGRESSIVE LOW-TEMPERATURE CARBURETION—produces high heat output without fuel "cracking"—leaves no soot or hard carbon deposits!

SPECIAL OIL HEAT CONTROL—permits burning lowest cost furnace oils, *including catalytic oil!*



Dual Register Model
Two Sizes: 55,000 and 80,000 BTU heat output.

TESTED AND LISTED BY UNDERWRITERS' LABORATORIES AND C.S. 113...PLUS MANY MORE SALES PRODUCING FEATURES

WRITE TODAY FOR COMPLETE SPECIFICATIONS AND SALES PLAN

H.C. Little Burner Company, Inc.

Head Office: San Rafael, Calif.

Factory Representatives in 16 Principal Cities

Do YOU have "Problem Jobs"?

The McGILLIS SAFETY VALVE

automatically shuts off supply of oil into tank at correct level:

. . . solves problem job troubles involving long fill pipes, dual and triple tank installations, vent pipes distant from fill pipes, or neighborhoods too noisy to hear audible signal, etc. *Prevents pressure shocking of tanks.*

Let the

McGILLIS SAFETY VALVE

improve service to your customers by eliminating the human accident factor while filling tanks.

Approved by Underwriters' Laboratories

Dealers, Distributors: Write for further information.

McGILLIS SERVICE ENGINEERING, INC.

1554 MAIN ST. BROCKTON, MASS.

STOCK NOW—for Summer Service Calls!

This Summer you will have your big opportunity to do suggestive selling. Every service call can mean the sale of a Klemm Fuel Oil Filter. This handsome unit will appeal to your customers and the clincher of uninterrupted service and pure clean oil will put extra profit in your pocket. Place an order with your jobber today and have your men carry one on every service call for easy sales.

Model 430G

*Model 430 Metal Bowl

Klemm

AUTOMOTIVE PRODUCTS CO.

1718 N. Damen St., Chicago 47, Ill.

Listed by Underwriters' Laboratories

FUEL OIL DEALERS!
OIL BURNER DEALERS!
SERVICE-INSTALLATION FIRMS!

MEMBER OHI OIL-HEAT INSTITUTE OF AMERICA

For a Stronger Industry

Join the **OIL-HEAT INSTITUTE!**

Oil-Heat Institute—OHI—a national trade association—serves all segments of the oil heat industry. Membership is comprised of "Manufacturer," "Accessory Manufacturer," "Technical" and "Distribution" Divisions.

Fuel oil and oil-burning equipment dealers, and service and installation firms form the Distribution Division. Two types of membership are available—in one of the 25 local "Chapters"—or, outside of territory served by a Chapter, as an "Associate" member. Both have equal rights.

As a member of the Distribution Division your business gains strength through unity with others of your industry and a voice in a strong national organization. You get constant, up-to-date help in directions of interest to your business affairs, promotional material to help sell your goods and services better, benefits such as group insurance coverage.

All we need to help you is your reply, telling us your name, address and whether you are interested in "Associate" membership or in helping to organize a strong progressive industry OHI Chapter in your area. We'll follow up, sending you all the information you need to take either easy step.

OIL-HEAT INSTITUTE OF AMERICA, INC.
DISTRIBUTION DIVISION
6 E. 39th St., New York 16, N. Y.

PREFERRED
DRAFT-A-JUSTORS

Cut Fuel Consumption by 10% TO 30%

The *Preferred* Draft-A-Justor is the original, patented Draft-A-Justor . . . improved to include the latest in engineering developments.

Stainless steel bearings and weather resistant metals provide long-life service without breakdown due to rust or wear . . . assure *continuous* fuel savings.

Millions now in satisfactory use.

WRITE FOR DESCRIPTIVE LITERATURE AND TRADE PRICES.

SIZES

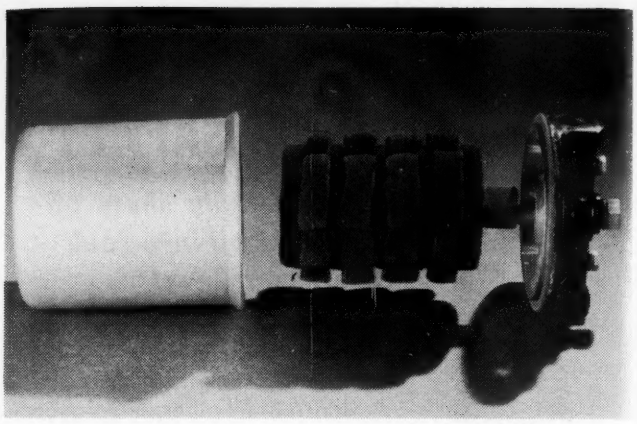
Store, domestic and commercial sizes from 4" to 24" in diameter.

Industrial sizes from 2' x 2' to 5' x 12'.

PREFERRED UTILITIES MFG. CORP.

1860 Broadway, New York 23, N. Y. Boston Office: 839 Beacon St.

New Products



Wool felt Inserts used in Eddington oil Filter

DESIGNED to protect oilburners, space heaters and water heaters using light fueloils from sludge, rust and other impurities, an oil filter developed by Eddington Metal Specialty Co., Eddington, Pa., features a felt insert for the filtering medium. The insert consists of nine washers, five circular washers 2½" O.D. x 23/32" I.D. and four washers 3¼" O.D. x 23/32" I.D., having fluted or serrated outer circumferences. The fluted design increases the effective filtering area from ⅜ sq. in. circular disc to 8.2 sq. in. fluted disc and the total effective filtering area is 50 sq. in. Liquid flow is laterally or horizontally through the felt and the minimum filter bed depth through which the oil flows is ½" thick in the narrow section of the fluted disc. During filtration, as plugging occurs in the narrow section of the disc, the liquid flow progressively works to the outer edge of the fluted section. The felt cartridge can be replaced without breaking the oil line.

Eddington decided on the felt insert because it found it to be well suited for filtering grits and metallic particles from oil. Wool felt contributes a uniform structure, free from voids and can be furnished in variable thicknesses, densities and degrees of fineness or coarseness. In addition, liquid flow rates and efficiencies can be predetermined for liquids of any given viscosity.

Performance data for the filters show that using No. 2 fueloil at a flow rate of 0.8 gph, particles 1, 4 and 10 microns in size were 100% removed; at flow rates of 6.0 gph particles 4 and 10 microns were 100% removed and at a flow rate of 25 gph, the larger 10 micron particles were 100% removed, indicating that the flow rates govern the particle size removed during filtration. Higher flow

QUICK PROFITS . . . EASY INSTALLATIONS . . . SATISFIED CUSTOMERS

when you go after

REPLACEMENTS and CONVERSIONS

with

BANKHEAT BURNERS

Now is the time to replace oil wasting burners with a Bankheat. It's the easiest selling that you can do today . . . selling that will make you a profit, and a new set of satisfied customers.

Bankheat Burners have an unequalled reputation for oil-saving efficiency. In thousands of homes they are powering boilers, boiler burner units and water heaters. For many years in many lands they have been building up a record of economical performance. They're fully automatic, precision built, easy to install, exceptionally dependable. They are today's best bet for dealers who want sales. May we send you the full story?

There's an automatic Johnson Burner for EVERY heating need.

Johnson Oil Burners

Builders of fine Oil Burner Equipment since 1903

S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.

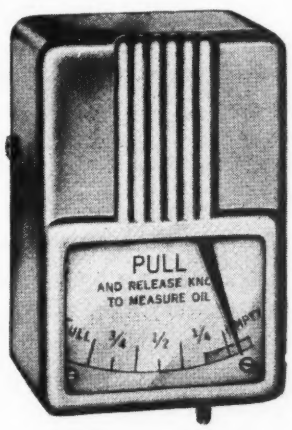
COMPARE THE PRICE

OF

SID HARVEY'S FUEL-O-METER

DISTANT READING

TANK GAUGE



Size
2⅝" x 3⅞"

And see the greater margin of Profit Fuel-O-Meter offers you.

See too how different Fuel-O-Meter is from the clumsy old fashion gauges; notice how compact it is.

See the beautiful silver bronze finish, examine the perfectly engineered "works." Then compare the price and you'll be amazed to find that it costs less than the gauge you have been using.

SID HARVEY INC.
VALLEY STREAM, NEW YORK

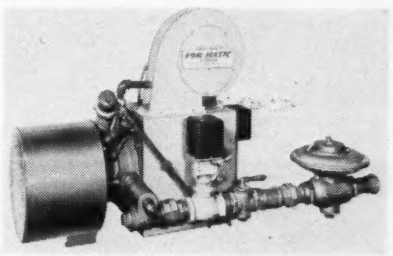
Boston • Bridgeport • Mt. Vernon
Hempstead • Jamaica • Newark
Union City • Highland Park
North Philadelphia • West Philadelphia
Baltimore • Washington • Arlington

rates can be used, with lowered filtration efficiency.

Made by: Eddington Metal Specialty Co., Eddington, Pa.

Fyr-Matic Burner is a combination oil-gas Unit

THE FYR-MATIC gas-oilburner features dual atomization for efficient burning of both fuels and can be switched from one to the other by the flick of a switch. Either No. 1 or No. 2 fuel-oil can be used, or mixed, natural or



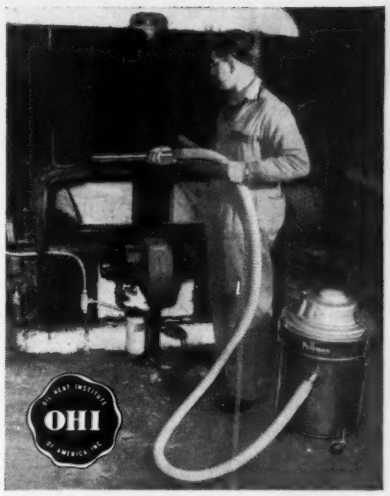
L-P gas. Either fuel can be burned without providing induced secondary air. The burner furnishes its own air for combustion.

Furnished with the burner is all internal wiring and piping to simplify installation and an adjustable burner support obviates the necessity to provide platform construction. The burner is a self-contained package and features instantaneous, electronic flame failure control with either gas or oil. Capacities range from 400,000 to 1,500,000 Btu and the unit may be furnished for oil only, if desired.

Made by: Eclipse Fuel Engineering Co., 1025 Buchanan St., Rockford, Ill.

Watts has new valve Line for temperature and pressure Relie

WATTS REGULATOR has announced a complete new line of combination temperature and pressure relief valves, making possible the correct selection of size and Btu temperature discharge capacities for any hot water supply system from the smallest home to the largest commercial-industrial installations. They incorporate a new Watts-designed thermostat of solid copper wall construction operating on a piston principle. The thermostat, totally impervious to corrosion, exhibits no flexing of thin metal parts and has the bulk of its thermal fluid



Efficient design lowers price of Pullman Furnace & Boiler Vacuum Cleaner

Here is the vacuum cleaner that gets you into the cellar and allows cleaning jobs to develop into profitable service work. Light in weight and very portable — only 30 pounds, yet has 1½ bushel capacity. No outside bag to worry about. Clean, neat appearance for working in living quarters of the home. Integral motor, internal filter, and circular air flow increase the efficiency of the PULLMAN vacuum and allows manufacturing cost savings which are reflected in its low price. No maintenance to worry about — just empty the container. Ball bearing, life lubricated, sealed motor. Electro-welded steel container. Equipped with 35′ cord, 10′ hose, and 27″ crevice tool for only $159.50 list, less trade discounts. Send for circular and name of nearest jobber.

NEW PULLMAN *Disposable* PAPER FILTER

New disposable paper filter protects fabric filter from soot acids and clogging. No more after-hours filter cleaning — just toss away and drop in clean filter paper.

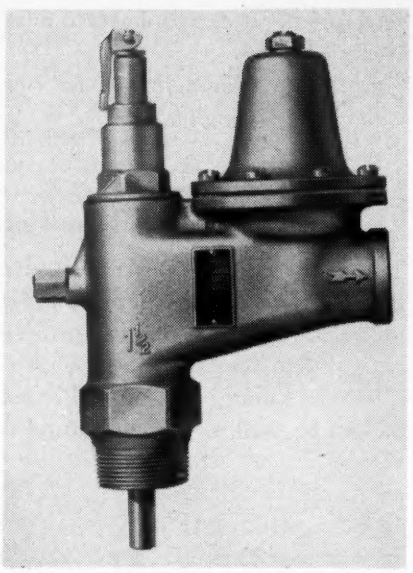
CONVERTS TO POWER BLOWER in jiffy. Blow out fuel tanks, clean air ducts, registers, beams, floors and in shop.

Pullman

PULLMAN SALES CORP.
MFR: BOSTON 19, MASS.

fill concentrated in a bulb at its lower end. Here it can be influenced directly by the actual tank temperature. Expansion energy in the bulb is transmitted through a capillary tube to the piston, which lifts the disc from its seat. Heat loss cannot retard its action and endurance tests have shown more than 100,000 operating cycles without appreciable signs of wear.

The Watts No. N40 series in this line replaces the No. 40 series and is intended for home and small installations with heat inputs up to 500,000 Btu/hr. Construction is bronze with brass internal trim, including a diaphragm pressure seal and a renewable seat above the drain outlet so that no water is trapped when the valve is closed. Provided with ¾" NPT male inlet and ½" NPT female drain connection, the N40 is available with or without test levers and extension thermostats. No. 240 is a larger version for systems with heat inputs up to 1,000,000 Btu/hr. It adds a replaceable thermal element and has a male inlet connection and a ¾" female drain. Available only with test lever and extension type thermostat. The No. 340, the largest valve in the line (illustrated), has a tested capacity of 3 million Btu/hr at 30 lbs. Thermal element and seat are replaceable. Available in one style only, 1½" NPT male inlet and 1" NPT female drain connections.

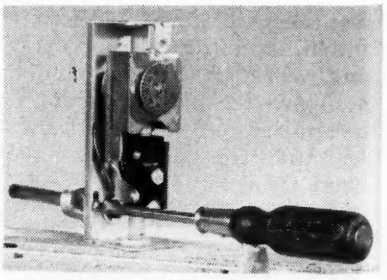


Made by: Watts Regulator Co., Lawrence, Mass.

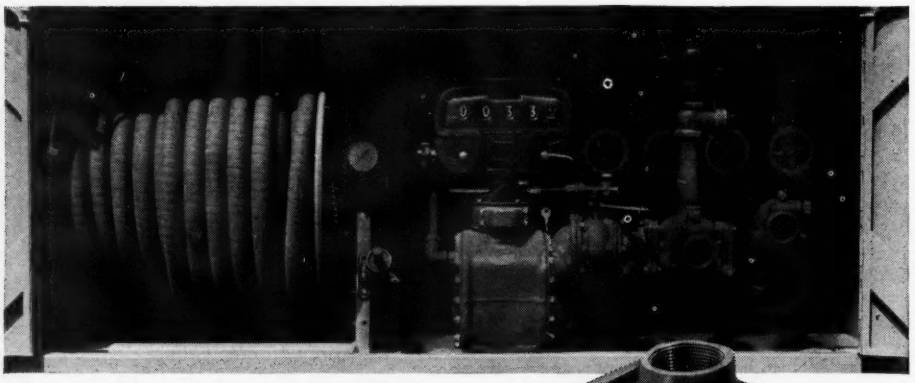
Six models in M-H's new line of Aquastats

THE L4006 SERIES aquastats has been announced by Minneapolis-Honeywell. They are described as fast-acting and easy to install, featuring an improved liquid sensing element, with switching accomplished by an enclosed Micro pin-plunger snap switch. Control points can be set externally without removing the cover. They are particularly applicable to small hot water boiler installations and are mounted with the element inserted horizontally. Models are available to break or make contact on temperature rise or with SPDT action. Well-type models can be installed from the front.

When used as controllers in hot water heating systems, they are installed directly in the boiler. They

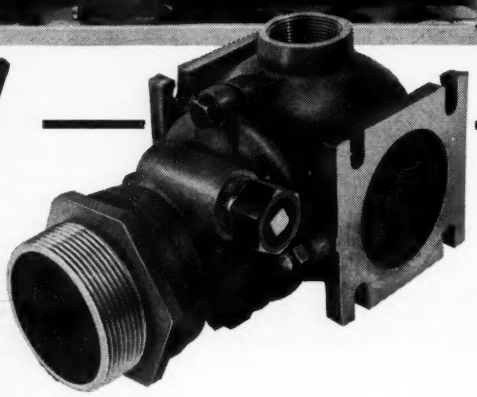


may be installed in the supply line to the indirect water heater, in the heater itself or in a fitting in the feed riser about 6" above the boiler. If the riser is valved, the aquastat is installed between the boiler and valve and if used



NOW!

A FULL FLOW MANIFOLD FAUCET THAT REQUIRES MINIMUM SPACE



Philadelphia Valve answers the long-standing need for a small, compact, full flow manifold faucet. This new faucet eliminates the need for bulky gooseneck piping. It takes up exactly the space required by a cross valve, and can quickly and easily be attached to any standard manifold. You can insert it either on the end of the manifold or between the cross valves or gate valves that make up the manifold assembly. A 1½" threaded outlet at the top permits speedy connection to a hose reel.

THREE TYPES ARE AVAILABLE:

1) STRAIGHT
2) BULK TYPE—*nozzle at downward angle of 22½°*
3) BUCKET TYPE—*nozzle at downward angle of 66°*

The faucet can be supplied in 2", 2½" and 3" sizes. Threaded and quick connector tips are available. Spouts and internal parts are all interchangeable with our regular line of faucet parts.

Write today for complete information and quotations.

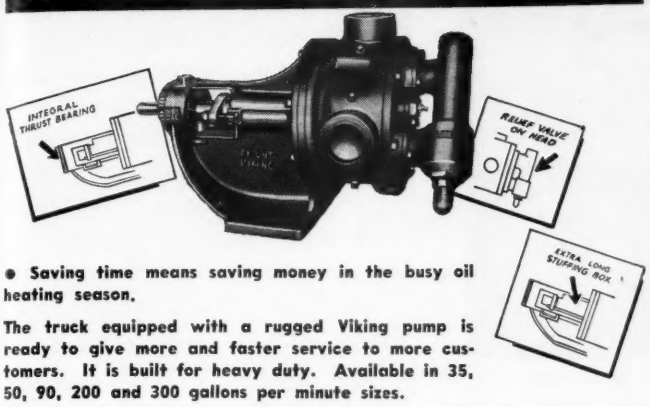
PHILADELPHIA VALVE COMPANY

3413 Aramingo Avenue, Philadelphia 34, Pa.

Pacific Coast Distributors: Oil Marketing Equipment Co., 325 Fremont Street, San Francisco 5, Calif.
Howard Supply Co., 5125 Santa Fe Avenue, Los Angeles 11, Calif.

VIKING··· THE TRUCK MOUNTING PUMP

FOR FAST, DEPENDABLE FUEL OIL DELIVERY



● Saving time means saving money in the busy oil heating season.

The truck equipped with a rugged Viking pump is ready to give more and faster service to more customers. It is built for heavy duty. Available in 35, 50, 90, 200 and 300 gallons per minute sizes.

Rugged but compact, it includes such outstanding features as:

1. Integral thrust bearing.
2. Extra long stuffing box.
3. Revolvable casing.
4. Double supported relief valve.
5. Pump operates in either direction.
6. Positive suction and discharge.

VIKING
AN HONORED NAME IN PUMPING

These and many more features assure fast, dependable fuel oil delivery. Send for bulletin 1507EE today!

See Our Catalog in SWEETS

Viking PUMP COMPANY
Cedar Falls, Iowa

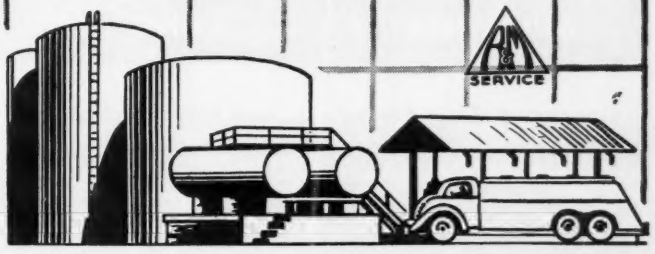
R & M SERVICE BUILDS PROFITS FOR OIL MEN

The *right* equipment in your plant means lower operating cost. You can depend on R & M men, with their intimate knowledge of marketing methods, plus various kinds of equipment, to help you select exactly what is best for your requirements.

RENICK & MAHONEY, INC.

Complete Equipment for the Oil Trade

380 SECOND AVENUE AT 22nd STREET NEW YORK 10, N. Y.



"BUCKEYE ACCESSORIES —built to be installed and forgotten"

No. 631
Double-Opening
T Vent

Buckeye Oil Burner Accessories are built to do a good job—to keep doing a good job year after year without maintenance. Buckeye's Double-Opening "T" Vent, shown here, is no exception. Its body is of sturdy cast iron and both openings have the double protection of a brass fire screen plus a heavy galvanized wire cloth. And like other Buckeye fittings, it can be installed and *forgotten*. Get better installations—specify BUCKEYE.

Buckeye

BUCKEYE IRON & BRASS WORKS, Dept. F, Box 883, Dayton 1, Ohio

Strainers • Sludge Pumps • Foot Valves • Fill Boxes
Check Valves • Vents • Shut-Off Valves • Bushings

OIL TANKS

for

Basement or Underground

Price domestic fuel oil storage tanks are manufactured to Underwriters specifications and bear Underwriters labels.

Obround Basement (Vertical or Horizontal)			Round Underground		
Cap. in Gals.	Gauge	Size	Cap. in Gals.	Gauge	Size
275	14 or 12	27 x 44 x 60	285	12	38 x 60
220	14 or 12	27 x 44 x 48	550	12	46 x 76
235	14 or 12	22 x 44 x 60	1000	10	52 x 110
275	12	22 x 44 x 72			

Write Today for Catalog and Prices

PRICE

FIREPLACE HEATER & TANK div.
PRICE NATIONAL CORPORATION

152 W. Austin Street
Buffalo, N. Y

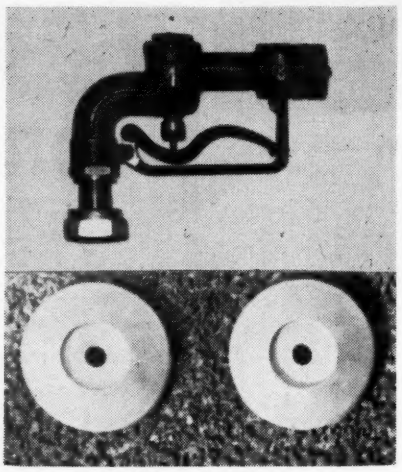
237 Jackson Rd.
Hatboro (Philadelphia), Pa

on a steam job with a summer-winter hook-up, it is located in the boiler 4" below the normal water line.

Made by: Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. South, Minneapolis 8, Minn.

McGillis hose nozzle Adaptor; tank leg Flanges

A DRIP-PROOF fueloil hose nozzle adaptor has been announced by McGillis Service, featuring an internal spout that extends inside the fill pipe to prevent dripping. A special gasket is used,



made of a combination of neoprene rubber and leather, with the thread faces of the adaptor carefully aligned so that a minimum amount of pressure is needed when tightening. Designed as a general duty, pressure type hose nozzle adaptor, it is especially suitable for use with the McGillis Safety Valve which automatically shuts off the supply of oil being pumped into a tank at the correct level.

Also introduced is a new type of tank leg support made of heavy bronze-aluminum. The supports are 4" in diameter and cup-shaped, with a round, threadless opening to accommodate the tank pipe-leg. The supports are designed to prevent the tank from settling and to improve the appearance of the installation.

Made by: McGillis Service Engineering, Inc., 1554 Main St., Brockton, Mass.

Lycoming LW Series offered in 15 Models

LYCOMING-SPENCER has announced its new divided low waterline "LW" series steel heating boiler. Fifteen models are offered, with SBI steam ratings from 4,250 to 42,500 sq. ft., SBI hot water ratings from 6,800 to 68,000 sq. ft. Spencer engineers developed the boilers to overcome problems posed by limited head room, restricted entry facilities, excavation problems and low waterlines. The new series has an overall height and waterline approximately 25% less than conventional boilers, and, though slightly wider, it is shorter and more compact.

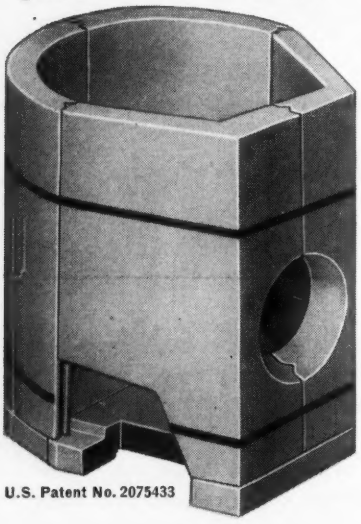
The divided design permits entry through narrower openings and requires no on-the-job welding. Outlet header is adaptable to either front or rear takeoff and boilers can be furnished with top or end connections or as a blank header for direct welding hook-up. The LW series features also extra high firebox and combustion chamber of ample size for all fuels. Mechanically-fired equipment can be installed front, rear or side.

Smokebox design is such that rear side plates may be removed for access to all second pass tube ends without disturbing the breeching. Breeching collar is removable. The boiler rests

LITE-CAST
COMBUSTION CHAMBERS
QUICK HEAT LONG LIFE

PEAR
ROUND
SQUARE
MODERN

Improved, Time-tested . . . and Outstanding in
QUALITY • EFFICIENCY • PERFORMANCE



U.S. Patent No. 2075433

TONGUE & GROOVE JOINTS
•
HIGHER SIDE WALLS
•
DOUBLE SEAL BETWEEN FLOOR AND WALLS
•
PRE-CAST FLOOR
•
AIR SPACE BENEATH FLOOR

4 SHAPES
25 SIZES
.75 to 12 G.P.H.

COMPLETE PACKAGE INCLUDES:
Combustion Chamber, Back Fill, Steel Bands and Finishing Cement.

STANDARD FOR 20 YEARS

Close to one half million installations are testimony to the sales making features of MONOGRAM COMBUSTION CHAMBERS.

Sales Helps Available—Illustrated Catalog, 36 page Reference Table, Wall or Counter Card, Direct Mail Folders, etc.

MONOGRAM PRODUCTS CO., INC.
731 NORTH 35TH STREET • PHILADELPHIA 4, PENNA.

Swirling Flame

VERTICAL HIGH PRESSURE
ATOMIZING OIL BURNERS

Offers you these
"Plus Advantages"

- No Combustion Chamber
- Less Service Calls
- Only Real "Packaged Burner"
- Faster, Easier to Install
- Higher CO-2
- Two models cover complete Light Oil field
- Fire Underwriters approved
- Bigger, Safer Profits
- Utilizes Radiant Energy

For full information write . . .

SWIRLING OIL BURNER MFG., CORP.
22-09 37th Avenue, Long Island City 1, N. Y.

ENGINEERED FOR YOUR BURNER

ACME ELECTRIC CORP.
506 WATER ST. CUBA, N. Y.

Acme ACME Electric
TRANSFORMERS

NEW SKINNER DEVELOPMENT
for Domestic Oil Burners

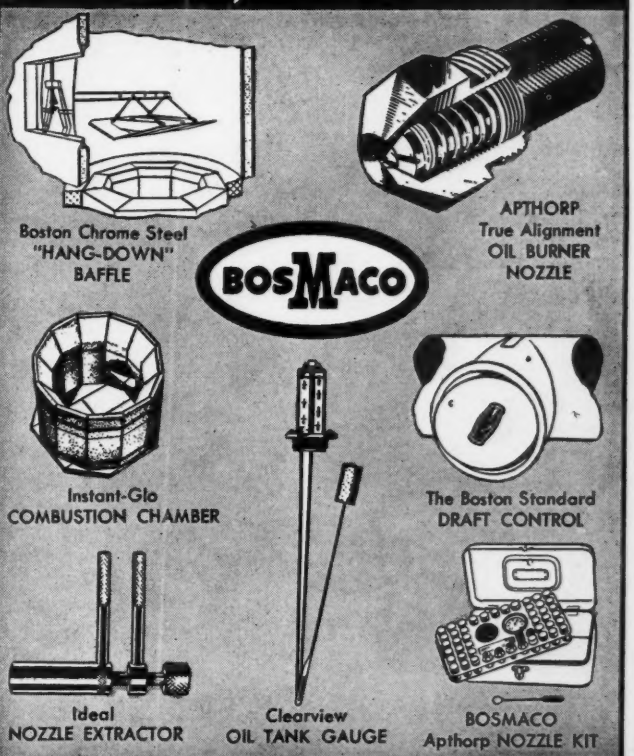
NEW V2-500
TIME DELAY VALVE

HELPS ELIMINATE SOOT & BACKFIRES
★
SMALL & COMPACT WEIGHT ONLY 9 OZ.
★
SAFE & SURE
★
SAVES FUEL
★
UNDERWRITERS' APPROVED
★
LOW COST
★
PROMPT DELIVERY

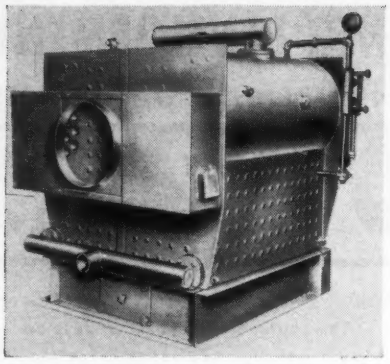
This outstanding new Skinner development promises new customer satisfaction whether installed on new or old oil burners. The V2-500 operates as follows: After blower, motor and pump start, the valve delays 5 to 6 seconds before releasing oil. At end of heating cycle, valve closes instantly preventing combustion while motor, pump and fan coast to a stop. This assures adequate air volume at start of combustion cycle, improves draft and helps eliminate sooty conditions. Valve is two-way normally closed; rated at 115 p.s.i. max. Coil is continuous duty rated at 9 watts max. Write for details and low prices!

SKINNER ELECTRIC VALVES ®
SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
141 Belden Ave., Norwalk, Conn.

FOR Quality INSTALLATIONS



WRITE FOR COMPLETE INFORMATION
BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.



on 4 extra-heavy corner posts and front, rear and side base plates are removable, without disturbing the boiler. Standard working pressures are 15 lb. steam, 30 lb. water; also available for water working pressures up to 100 lbs. All are ASME constructed.

Made by: Lycoming-Spencer, Div., AVCO Mfg. Corp., Williamsport, Pa.

Wayne portable gun Burner with gasoline-engine Drive

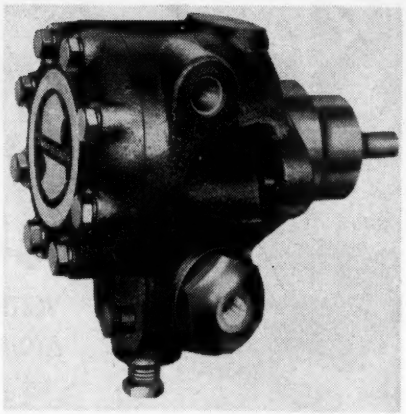
A WAYNE 1.5 hp. gasoline-engine-driven oilburner has a capacity range from 0.8 to 2.5 gph. The unit, which is being manufactured for the Government, operates without outside electric current supply. The gasoline engine drives the fuel pump and fan and the engine-driven magneto generator, assembled as part of the unit, supplies the power needed for ignition.

Made by: Wayne Home Equipment Co., Inc., Fort Wayne, Ind.

Sundstrand introduces Model H self-purging, 2-stage fuel Unit

MODEL H, newly introduced Sundstrand 2-stage fuel unit, is self-purging, designed to pump only solid oil to the burner's nozzle since the oil circuit automatically purges all air. It features leak-proof valve construction, "Rota-Roll" pumping unit, adjustable piston-type valve for pressures from 75 to 150 psi, large and easily-removed strainer, new anti-hum diaphragm and hydraulically-equalized pumping members for quiet operation.

Interchangeable with Sundstrand models R, J, K or S-1, model H is offered for 3, 6, 10, 14 and 20 gph

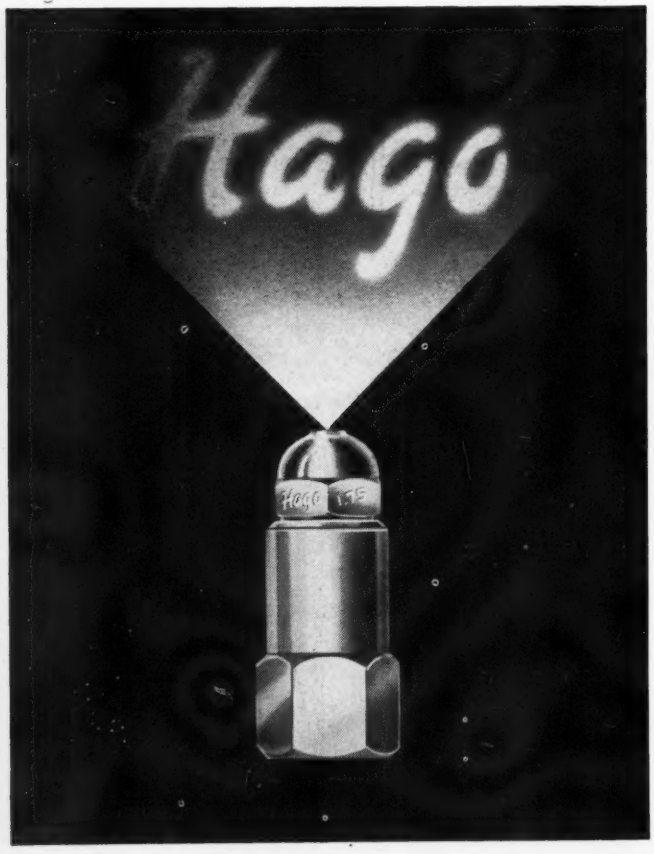


firing rates, strainer capacities of 6, 10, 15 and 20 gph. Recommended for two-pipe systems having vacuum requirements up to 20 ins. A new data bulletin is available.

Made by: Sundstrand Machine Tool Co., Hydraulic Div., Rockford, Ill.

Holdtite announces combination check Valve

HOLDTITE is a combination check, anti-hum and anti-syphon valve, 3/8" I.P.S., that may be installed in any



HAGO PRODUCTS
1281 SPRINGFIELD AVE. IRVINGTON 11, N. J.

HomEase is the Burner that offers you the Exclusive
FLAME-IZER . . . high CO_2 flame-fitting to the individual fire-box, quickly, easily!
FIRE-STAT . . . more starting air—thus less sooting and smoking on cold starts!
MORE SALES.. GREATER PROFITS easily!
VARIOUS MODELS: .5 to 15 gph
HomEase has an important place in thousands of homes . . . has thousands of satisfied owners . . . it should have an equally important place with *you*. Get the all-important facts, *Now*
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HOMEASE
OUR REPRESENTATIVES SEE VOL. III THOMAS REGISTER

85% YEAR AFTER YEAR OF ALL NEW OIL BURNERS ARE EQUIPPED WITH...

Dielectric IGNITION ELECTRODES

For many years DIELECTRIC ignition assemblies have been the overwhelming choice for new burners or as replacements. They're ahead for 5 big reasons:

BETTER SERVICE ON NEW DESIGNS • QUICK DELIVERY OF STANDARD PARTS
AUTOMATIC PRECISION PRODUCTION • HUNDREDS OF STYLES • LOW PRICES

DIELECTRIC electrodes are the finest available in standard types and in special sizes and shapes, all UNDERWRITERS' approved.

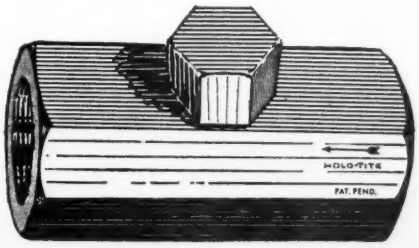
DIELECTRIC also makes high tension cable assemblies and bus bars for transformer and electrode layouts for any burner hookup.

Go DIELECTRIC and you'll never again settle for lesser quality or service.

DIELECTRIC

PRODUCTS CO., Inc., 125 Virginia Ave., Jersey City 5, N. J.

position. Applicable to one and two-pipe, gravity or suction installations, the valve has a replaceable ball and seat that may be changed without removing the valve from the line.

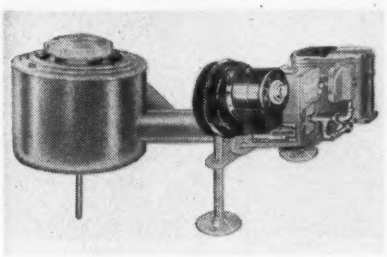


The compact unit measures less than 2" in length, is machined from solid, hex bar, brass stock. Guaranteed for one year from the date of installation, Holdtite is described as vibration proof and quiet in operation.

Made by: "Holdtite" Valve Co., 735 Lexington Ave., New York 22, N. Y.

Miller conversion Burner equipped with gas Pilot

A NEW MILLER mechanical draft vaporizing oilburner, formerly supplied as a flange-mounted type only for use on original equipment, now is being offered as a conversion burner. It has a maximum firing rate of 0.75 and is equipped with a simple gas pilot to give service-free operation, particularly during mild weather when pilot lights operate for long periods.



The burner also features a new transformer-motor-blower combination, factory wired to the oil valve. This T/M blower unit provides thermal overload protection of the manual reset type for both motor and transformer and insures oil to the burner being shut off if the motor becomes inoperative for any reason. The arrangement also simplifies wiring.

Inclusion of built-in spirit levels makes the burner easy to level. Its

GIVE YOUR CUSTOMERS THE BEST

NEW SPARKLER FUEL OIL FILTER

with the rayon filtering element traps all storage tank dirt, rust and moisture that could possibly plug the fine nozzle parts. Makes a smooth operating burner and cuts emergency service calls.
Install a Sparkler Filter along with summer servicing of burners and make a sweet extra profit on the same call.

FREE to all oil burner dealers—postcards for soliciting summer service business. Write for sample and particulars.

FOUR FILTER SIZES AVAILABLE

	For average annual oil consumption of	Recommended for
OB-2	2000 gals.	Average home burner.
OB-4	4000 gals.	Apartment building and light industrial.
OB-8	8000 gals.	Heavy industrial.
SH-3	1000 gals.	Space heaters and other small burners.

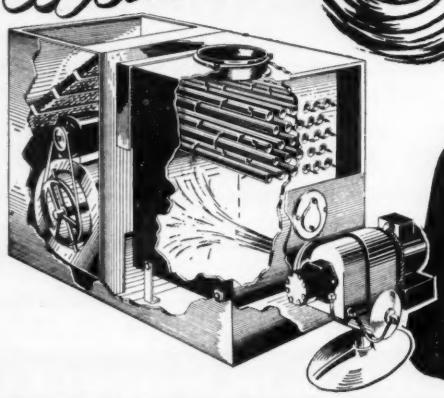
Refill discs are conveniently packed 12 to a package.
The same discs are used on all OB models.

SPARKLER MANUFACTURING CO. MUNDELEIN, ILL.
Makers of fine filtering equipment for industrial use for over a quarter of a century

Have YOU installed a.... TURB-O-TUBE Furnace and made a REAL PROFIT?

ONE Installation Sells TEN MORE because of —

- **ECONOMY**—every bit of heat is utilized by patented tube construction.
- **LOW INITIAL COST**—Inquire!
- **COMPACT, PACKAGED UNIT**—Factory assembled.
- **CONVENIENCE**—all parts easily accessible.
- **FIELD-PROVEN**—in sales, in customer satisfaction.



THE FIRST NEW IDEA In Heat Transfer In Years! It's the Tubes That Do It!

Write to—

TURB-O-TUBE FURNACE, Inc.

204-8 RHODE ISLAND ST. BUFFALO 8, N. Y.

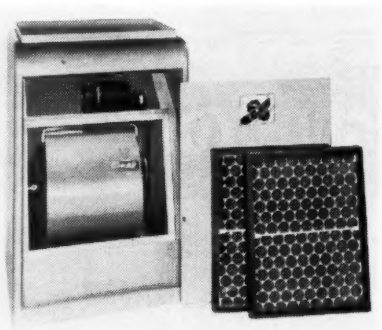
Made in Canada by the Conroy Mfg. Co., St. Catharines, Ont.

constant level valve has an automatic safety with no manual reset, while factory setting of air and oil flow rate simplifies installation. The burner can be used in combustion chambers up to 18", within the limitations of its 0.75 gph firing rate.

Made by: Miller Co., Heating Products Div., Meriden, Conn.

Lau Blower improves Series 8000 blower Units

LAU BLOWER Series 8000 blower filter units have been improved and are being offered in 5 sizes for bonnet outputs of from 44,000 to 196,000 Btu/hr., 100° temperature rise; from 31,000 to 138,000 Btu/hr., 70° temperature rise. The smallest of the packaged units, model 8070, is equipped with a single 20" by 20" air filter, the 8096 and 8106 models have two 16" by 20" filters; model 8126 and model 8124 are equipped with one 16" by 25" and one 20" by 25" size.



The 8070 incorporates a direct drive, with a 7½" double inlet blower and the motor built directly into the unit. It has fingertip control for a wide range of speeds to give accurate C.A.C. adjustments. This model is specifically for conversion of new furnace installations to forced air.

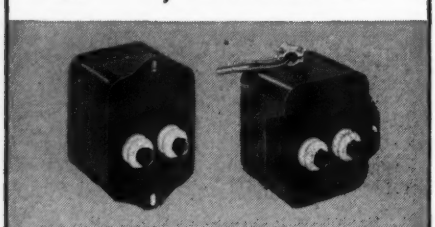
The other four models are belt-driven units, with cabinets assembled with blowers attached, motors being shipped separately. All the units are built for continuous air circulation.

Made by: The Lau Blower Co., Dayton 7, Ohio.

Water-finder Paste and Paste measuring Unit

TANKTEX is a water-finder paste and Findicator is a measuring instrument used in conjunction with the paste. Tanktex, which turns from green to red at water level, is easy to apply and is able to withstand cold temperatures without congealing. Findicator is an inexpensive measuring device for checking water level in petroleum. A tubular indicator of oil resistant plastic, it is clearly marked in graduations up to 6½ inches. It is scientifically weighted to maintain a perpendicular position on the base of the tank without tipping. Tanktex is smeared on the Findicator which is then lowered into

"always specify" UNIQUE IGNITION TRANSFORMERS for dependable performance!



- Standard mountings or designed to meet your specifications.
- Radio shielded and adaptable to any oil burner installation.
- Unconditionally guaranteed against mechanical and electrical defects. Write for details today!

UNIQUE ART MFG. CO., INC.

Makers of Quality Products Since 1910

200 WAVERLY AVENUE, NEWARK 8, N. J.

JUST WHAT THE DOCTOR ORDERED

SID HARVEY'S
FURNACE & BOILER
VACUUM CLEANER

NO OUTSIDE DUST BAG

The one man vacuum cleaner that you have been waiting for!

Two Dust bags for double protection, both safely enclosed in metal tank.

One bag is conventional cloth and the other a specially treated paper filter. The paper filter catches the dirt that seeps through the cloth bag. It can be emptied and used repeatedly. Powerful motor —Light weight.

LOW PRICE $111.65 F.O.B. COMPLETE AS SHOWN

SID HARVEY INC.
VALLEY STREAM, NEW YORK

Boston • Bridgeport • Mt. Vernon
Hempstead • Jamaica • Newark
Union City • Highland Park
North Philadelphia • West Philadelphia
Baltimore • Washington • Arlington

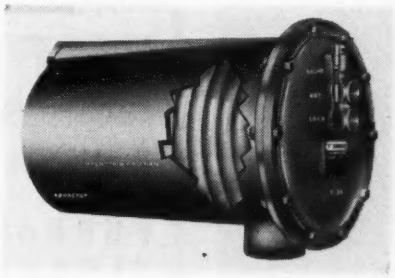
the tank on an 8 ft. oil resistant plastic line (60 lb. test) which is attached to a flat wooden reel. Oil will not drip or cling to the Findicator. The whole compact unit can easily fit into a tool box.

Made by: Tankit Co., 17 Shepard Ave., Newark, N. J.

Alstrom tankless Heater with tempering Valve

ALSTROM TANKLESS WATER HEATERS now are equipped with built-in manual tempering valves, incorporated in the removable cast-bronze convex head of the heater. The valve is easily adjusted for summer-winter control of hot water temperature and does not create a pressure unbalance. Valve is preset at the factory to give the best performance under normal conditions. When the by-pass must be regulated, a twist of the wrist affords complete control over the cold water, properly tempering the desired hot water.

"T" series and Uni-Heat tankless heaters have a minimum pressure drop because the all-helically-wound coil



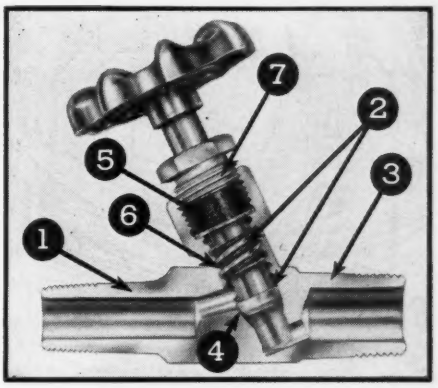
has continuous smooth curvature and no soldered joints. The coils are made of 5/8" copper tubing; the cast-iron shell, designed for balanced flow over the coil, has a self-flushing sludge chamber, aquastat opening and an octagonal inlet boss to simplify installation. A 1/8" vent is provided for freedom from air binding and all units are hydrostatically triple-tested. Hot water capacities are 4, 6 and 8 gpm.

Made by: Alstrom Corp., 790 East 186th St., New York 60, N. Y.

Connor announces Diffuser for residential Systems

A LOW COST ceiling air diffuser, added to the W. B. Connor line, has been designed for residences, while retaining

The INSIDE STORY of Guardian SUPERIORITY



No. 1900 Oil Filter Valve

No. 1300 Two Tank Control Valve Assembly

No. 1600 Underground Tank Valve

No. 1400 Globe Valve for Oil, Water or Gas

No. 1905 Oil Filter Valve made with 1/2" inlet I.P.T. male threads and 3/8" outlet I.P.T. male threads.

One valve may look much like another on the outside—but it's what's INSIDE that counts! Every Guardian valve has these features of superiority shown in the cutaway above:

1. Denser, superior graining of extruded brass.
2. Finer machined thread and seating surfaces.
3. Greater wall strength and body strength.
4. Identical brass in stem and seat for greater wear . . . eliminates seizure.
5. Preformed asbestos - graphite rings for packing uniformity.
6. Quick-acting threads for opening and closing.
7. Adjustable packing nut for take-up of packing wear.

No. 1200 Individual Tank Control Valve

Guardian valves are designed for oil line service . . . built with precision . . . tested for uniformity. Look for the name "Guardian" on the valve.

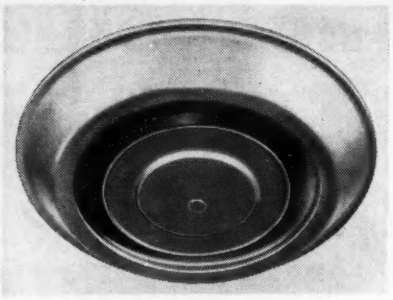
Write for Bulletin V-101.

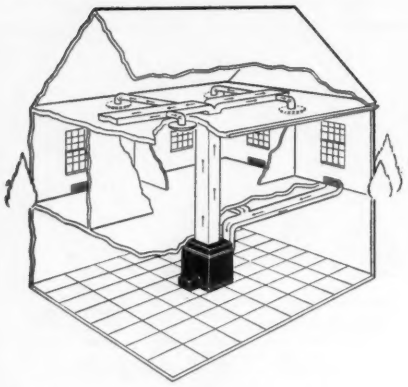
IHO MEMBER OIL HEAT INSTITUTE OF AMERICA

Guardian PRODUCTS CORP.
VALVE DIVISION

Dept. F-62, 1231 E. Second Street

Michigan City, Indiana





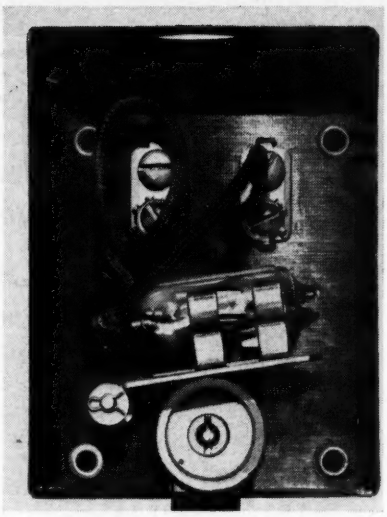
performance characteristics of the company's standard industrial models. It is a small, dome-shaped outlet, occupying little more space than a ceiling light fixture, and consists mainly of a collar or neck and an inner and outer deflector. The inner deflector is positioned so that air is discharged outward and downward; the outer deflector, essentially a rounded shoulder, diverts the air from the adjacent ceiling area. Cooler air is pulled out of the room by baseboard grilles, as shown in the schematic drawing.

Overhead diffusion, described as no more expensive than ordinary forced warm air designs, requires supply ducts to be located in the attic. Prefabricated round ducts and elbows are used, with the furnace bonnet going straight up through the house, usually being concealed in a closet.

Made by: W. B. Connor Engineering Corp., Shelter Rock Lane, Danbury, Conn.

Patcomatic protects against excessive boiler Temperatures

PATCOMATIC BOILER PROTECTOR provides a safe over-temperature protective device which depends only on the transmission of heat from the boiler surface for its operation. The wiring of the Patcomatic is simple. There are no intricate secondary circuits required to interrupt the fuel supply



to the boiler or furnace. No pipe connections are necessary to install this control. Should a boiler overheat, Patcomatic goes into operation by melting a low temperature fusible element. This disc can readily be replaced after the cause of the overheating is corrected. The Patcomatic boiler protector cannot fail due to rust or corrosion.

Made by: Patco Mfg. Co., 942 East 12 St., Brooklyn 30, N. Y.

The FYRITE Combustion-Testing MASTER KIT

Helps You Build Profits and Prestige

Combustion-testing builds business in two ways. First, it boosts service profits because with instruments any service job can be done in less time and by less experienced men. Second, it brings in new equipment business by spotting fuel-wasting burners through a dramatic "fuel-saving" check-up which will convince even the most skeptical customer of the need for replacement or modernization.

Keying your sales and service to fuel conservation will work wonders for you. It will establish you as a "fuel-saving" expert and help you corner an even larger share of immediate and future sales in your community.

The MASTER KIT shown above will appeal particularly to those who want professional implements of highest quality and reliability, as well as of impressive display. The cost of the kit is very small compared to the sales and service profits it will bring you.

Ask your Jobber or Write for Bulletin 733

BACHARACH Industrial Instrument Co.

7000 BENNETT STREET • • PITTSBURGH 8, PA.

KENT

Double Suction

FURNACE CLEANER

Designed for profits by one of America's foremost manufacturers of suction cleaning equipment!

√ **Check KENT for PERFORMANCE!**
Powerful, efficient double-suction . . . no dust passes through fans . . . no outside dustbag!

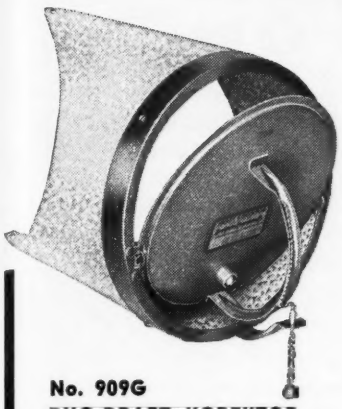
√ **Check KENT for CONSTRUCTION!**
Low center of gravity, less chance of tipping! Separates into 2 parts for easy carrying! Live outlet at switch for extension light!

√ **Check KENT for ECONOMY!**
It's built to last . . . minimum time out for repairs . . . maximum service under difficult conditions!

Full information upon request

CLEAN WITH KENT EQUIPMENT

The KENT Company, Inc. • 434 Canal St. • Rome, N. Y.



No. 909G
DUO-DRAFT KOREKTOR

FOR GAS

This double-acting Draft KoreKtor has gained wide acceptance for its carefully engineered features. The smallest details have been skillfully planned to provide the unmatched quality so typical of all Cole-Sewell controls. Furnished with or without sleeve . . . 7″ through 12″ sizes.

We'd like to send you full details.

COLE-SEWELL *Engineering Co.*

2288 University Ave. St. Paul 4, Minn.

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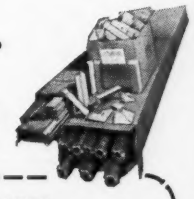
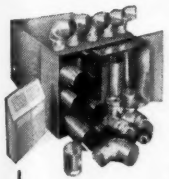
2 G/A PACKAGES... DESIGNED TO INCREASE YOUR PROFITS!



FLOORLEVEL HOT WATER BASEBOARD

G/A's all-in-one Floorlevel Package cuts installation time . . . labor costs . . . and materials. All you need know is the amount of radiation required. Send for Spec. 56 with complete profit details.



Temp-RD AIR WARM AIR HEAT

Simplifies small home sales. Complete package features new type diffuser to eliminate drafts. Easy to handle, store and install! Write for full details on this profitable warm air package.

GENERAL *Automatic*
GENERAL AUTOMATIC PRODUCTS CORP.

2300 Sinclair Lane Baltimore 13, Md.

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for QUIET OPERATION of fans, pumps and blowers . . .

LOVEJOY
TYPE UX DOUBLE FLEX
FLEXIBLE COUPLINGS

The rubber center unit gives added flexibility to this Lovejoy Flexible Coupling and assures smooth, quiet operation. It's specially designed to correct misalignment, with maximum absorption of shock, vibration, torque and overload. Easily installed — even in close, dark quarters.

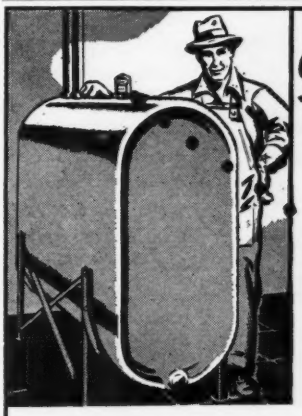
Most fan manufacturers supply blowers with L-R jaws on blower hubs.

SEND TODAY FOR COMPLETE LOVEJOY CATALOG

OIL HEAT INSTITUTE

LOVEJOY FLEXIBLE COUPLING CO.

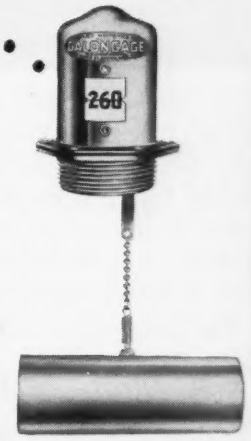
5012 W. Lake St. Chicago 44, Illinois



Galongage

Reads in Gallons!

The Ideal Gauge For Basement Tanks



Look at these FEATURES!

- **Reads in Gallons—no guesswork**
- **Precision built, yet ruggedly durable**
- **Comes fully assembled—ready to use**
- **Saves valuable installation time**
- **Magnifying lens—instant readability**
- **Outstanding in appearance**

Calibrated for each standard size 275—250 and 220 gallon tank with depths of 44″, 42″, 27″, and 26″, with 1½″ or 2″ tank openings.

Also INTERNATIONAL *for the finest in lever arm type gauges*

APPLIED MECHANICS COMPANY
167 OLIVER STREET, BOSTON 10, MASSACHUSETTS

Use "CRESCENT PARTS" Service

SERVING THE ST. LOUIS TRADE AREA

Authorized Fuel Unit Service Station

"FACTORY REBUILT" Repair Exchange control service on all popular makes at regular manufacturers list prices and trade discounts.

STOKER AND OILBURNER PARTS

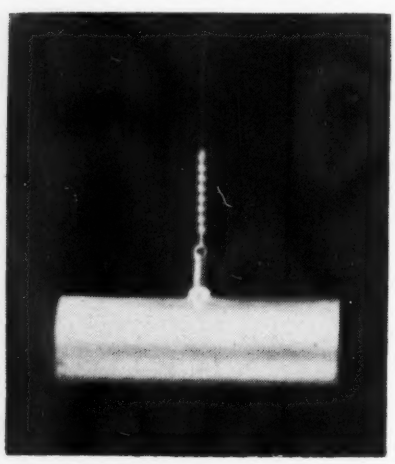
SEND US YOUR ORDERS OR INQUIRIES

CRESCENT PARTS AND EQUIPMENT CO., INC.

825-831 S. Boyle Avenue St. Louis, Missouri

Galongage tank Gauges using new type Float

GALONGAGE fueloil tank gauges are now equipped with a new type float, made with a foam glass core enclosed within a galvanized cylinder, and sealed at the ends with shellacked cork discs. The design is intended to provide a rugged and dependable float,



which would function properly even in the event that the outer tube became damaged and was no longer oilvanized holder is to provide weight and protection for the extremely light foam glass core. The float is suspended by a shock-absorbing spring.

The principal function of the galtight.

Made by: Applied Mechanics Co., 167 Oliver St., Boston 10, Mass.

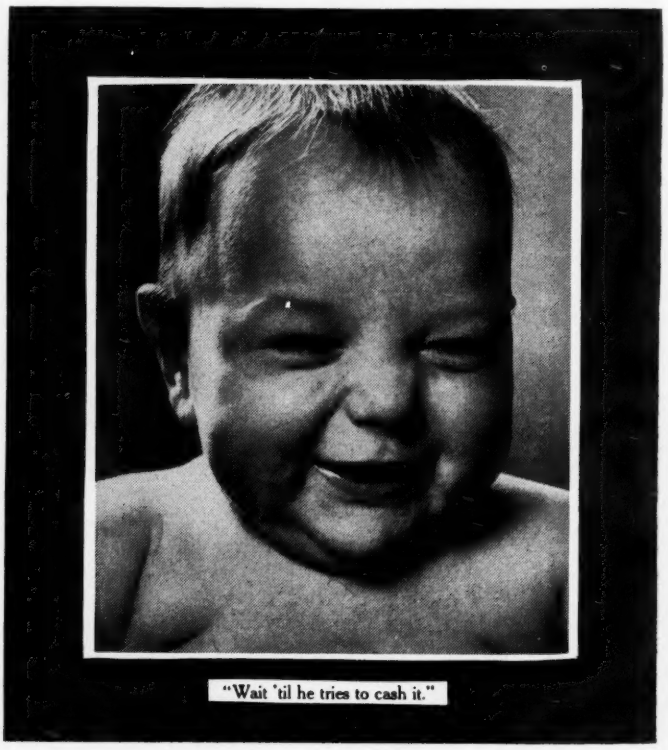
❖

John A. Savage has been appointed by Blackmer Pump Co., Grand Rapids, Mich., petroleum industry sales representative for northern New Jersey. Savage had been for many years with marketing engineering departments of major oil companies.

The Oil Heat Institute of America, *New York 16, N. Y., has "robbed the cradle" for a series of baby pictures to illustrate its 1953 calendar, and in doing so, has come up with a delightful, humorous calendar. Pictured is one of the 13 baby pictures, each with its pointed caption, that every homeowner will enjoy.*

The cover has a Christmas motif with the first month starting with December, 1952, to permit the dealer to mail in November and avoid the heavy Christmas mail rush, and runs through December, 1953.

The calendars are being offered to members of all three OHI Divisions, Manufacturer, Accessory and Dealer. For information about cost, quantity, packaging, imprints and so forth, write to OHI of America, Inc., Distribution Division, 6 East 39th St., New York 16, N. Y.



"Wait 'til he tries to cash it."

JULY 1953

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

MEMO

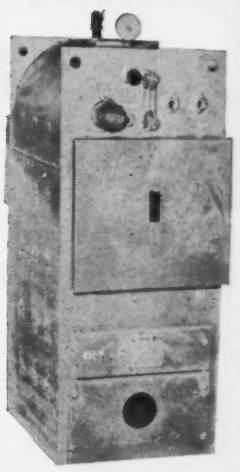
For a *good* check on your next winter's heating, we're the folks to call. Cash in on our special summer tune-up service.

NEW YORKER
FIRE TUBE STEEL BOILERS

New Yorker Steel Boilers are designed and constructed to provide unsurpassed heating excellence, exceptional economy and long-life satisfaction. These outstanding boilers give the highest efficiency possible in hot water, steam or radiant heating.

- VERTICAL BOILERS AVAILABLE WITH ASME STAMP
- ALL BOILERS GUARANTEED FOR 1 YEAR AGAINST DEFECTS IN MATERIAL & WORKMANSHIP
- ATTRACTIVE BLUE & GRAY HAMMERTONE STEEL JACKETS

Write or Call for Further Information



NEW YORKER STEEL BOILER CO. INC. • Colmar, Pa. • Lexington 784 or 838

More on "Exam for service Men"

(*Begins on page 54*)

"C" could be correct. Think of a furnace job where you want nearly-continuous operation of the circulating blower on days cooler than about 45°. To achieve this, on many jobs you have to put up with six-minute "on" periods whether or not you prefer longer burner "on" periods.

"D" could not be correct as the answer to question #1. The reasons for this are too lengthy to delve into here, and fortunately need not be given because no service man argued with us that "D" could be right.

Because "A," "B," and "D" could not possibly be the correct answer to question #1, "C" must be the right answer even for the many service experts who wrote us to explain that they don't go for short "on" periods, or consider faulty the installation that runs a burner for only six minutes at a time.

"Today's domestic fueloils are much more difficult to burn clean than the oils delivered before the war," one high-minded burner engineer sums things up, "and the fireboxes in most of the oil-designed furnaces and boilers are far inferior to the best high-wall firebox made of insulating firebrick for a conversion burner. The refractory or metal firebox of a cheap furnace (being sold by the thousands) just doesn't reach a cherry-red hot temperature within even ten minutes so as to give soot-free combustion. So in indicating that six-minute 'on' periods are perfectly all right, you are leading to more and more soot on modern oil-fired jobs and playing right into the hands of certain important competitive fuels. Even my oilburner makes soot when it runs only six minutes at a time."

Here's a confession. Eyeing dozens and dozens of letters that came in on this point, most of them technically excellent, I certainly wish that I'd put 12 minute "on" periods and 30 to 45 minute "off" periods into that first question!

But the quality of question #4 can be defended, even though dozens of letters came in about this question also. Here it is:

Question 4—Mark the one of the following items which comes closest to telling why pressure burners connected to outside tanks usually have return lines.

A. To avoid breakdowns caused by air-binding of pumps or fuel units.

B. To warm up outside tanks.

C. To avoid excessive nozzle pressure, which would result from failure to install a return line.

D. To permit using a small suction line; with no return line, a large suction line is needed.

"B" and "D" can be ruled out at once. Considering whether the correct answer is "A" or "C," the men who wrote us about this question considered "C" correct, whereas the correct answer listed was "A." Our point is that you don't need a return line to avoid excessive, uncontrolled nozzle pressure. Where you don't use a return line, you use either an internal by-pass arrangement or an external loop to permit the pressure regulator valve to pour its output oil into the suction line, the suction line strainer, or an equivalent location in the fuel unit. "C" is wrong because a one-line inside-tank installation has no return line, and needs none to avoid excessive nozzle pressure. Thus avoiding excessive nozzle pressure is not the reason for using a return line.

Question 10 bothered the men who thought it indicated the flame was "leaving the nozzle" and therefore "C" was correct. The tip-off to the correct answer "D" lies in the fact, given in the question, that the nozzle pressure drops to 60 lbs. every five minutes.

Question 12 deals with the big reason for installing a swinging-disc or similar smokepipe draft regulator, and the correct answer was listed as "B," preventing excessive over-fire draft. A few men argued mildly about this. They wanted to say that reducing the stack temperature is the big reason for installing this type draft regulator. On a job that gives readings of 9% CO_2, 800° stack temperature, and .04" over-fire draft, will you certainly reduce the stack temperature by installing a smokepipe draft regulator? Whether or not you will is debatable.

FRAM FILTERS cut nuisance calls, lower costs . . .

Fram Fuel Oil Filters save you time, trouble and money . . . practically eliminate "nuisance" service calls! Fram protects pump valves and burner nozzles from damage and malfunction because of dirt, rust, scale, grit and water in the fuel. And Fram Filters build customer goodwill for you because oil burners operate more economically and dependably with Fram protection!

Write for full details TODAY!

Fram Fuel Oil Filters are available in capacities of 2000, 4000 and 6000 gallons of oil consumed per year. Write to: FRAM CORPORATION, Providence 16,R.I.

Specified by leading Oil Burner Manufacturers

FRAM FUEL OIL FILTERS

But you certainly, after installing a good draft regulator, will be able to keep the over-fire draft at close to .02" draft, for example.

You don't install a smokepipe draft regulator to avoid overheating a stack control, as many who took the examination thought! Where the draft control is so close to the stack control as to chill its heat-sensitive smokepipe element, then you are in trouble! You've installed things improperly, and you'll have to correct your mistake to get out of the trouble.

We are planning additional examinations to be published within about a year, exams on commercial-industrial installations, and more difficult exams on domestic burners. They will include much on the things a good service man must know about wiring diagrams, controls, and locating electrical trouble; also, they'll cover the heating system and summer-winter hot water problems encountered in everyday service work.

One dealer requests specifically that we do not publish the correct answers in the same issue of the magazine that has the examination. His men got hold of his copy of FUELOIL & OIL HEAT before he saw it, and so got the correct answer data before he could give them the examination to find out how good they are. If it develops that other dealers like his idea, we'll go along with it.

Note: The letters that appear in this article are copies of the original letters which were sent by readers. Copies can be made which are more suitable for such reproduction than the original letters.

Self-service Trouble-shooting

(*Begins on page 62*)

The order card for these services is reproduced, requiring only a check alongside the items desired and a signature.

Fueloil renewal agreements consist of a postcard, which merely calls for Riker to supply fueloil for the next heating season "automatically as before." The customer also can order a vacuum cleaning or overhaul at the same time, if they do not have contracts already in effect which entitle them to these services.

Practically all of Riker's 3,000 customers are on automatic delivery and about 500 of them last year bought fueloil under a 12-month budget plan. Each one receives a packet of 12 envelopes for monthly remittances, a double stub being provided for each,

SINCE 1927

STANDARD AUTOMATIC OIL BURNERS

Shell Head Models Available

IT TAKES PERFORMANCE TO MAKE A REPUTATION.

•

Write for Territory open in your Locality

Models from ¾ gal. to 20 gal. per hr.

STANDARD ARCOIL CORP.

21-23 Broad Street Newark 4, N. J.

R&I Combustion Chambers

- Last Longer
- Heat Up Faster
- Cut Fuel Bills

One Size Makes Any Shape Easy to Install

Write for Free Copy of "Better Combustion Chambers"

Many thousands of these quality chambers are giving real customer satisfaction. Ask your supplier. Write for prices on these chambers and R & I refractory and insulating materials for better oil burner installations.

REFRACTORY & INSULATION CORP.

116 WALL STREET · NEW YORK 5, N. Y.

OILHEATING BOOKS

OILHEATING SNAGS

This book gives the solution to many of the Everyday Snags that annoy you in installation and service. We've been working on them for years. They are all simple and practical answers to the most common goat-getters on jobs. It's an 8½ by 11 inch book of 64-pages.

$1.

HEADING OFF TROUBLE IN DOMESTIC OILHEATING

This book contains articles about the most important precautions to take in installations and service and thereby cut down the number of service calls. The selection is about those things which give the greatest amount of future trouble for service men. A highly practical compilation of pieces from FUELOIL & OIL HEAT. It's a 64-page book 8½ by 11 inches.

$1.

INSTALLING THE DOMESTIC OILBURNER

This is the first practical guide on oilburner installation. It contains the most significant articles from FUELOIL & OIL HEAT that cover all phases of installation step by step. It is 8½ by 11 inches and contains 64 pages. Illustrated with numerous diagrams, charts and photos.

$1.

LOW PRESSURE BURNERS

Only book other than manufacturers' manuals that gives a full picture of low pressure burner principles of operation and construction—Winkler, Oil-O-Matic, G. E., Hart, Hev-E-Oil. Skeletonized diagram of each make of burner makes them more understandable. The new booklet is 8½ by 11 inches, contains 20 pages.

$1.

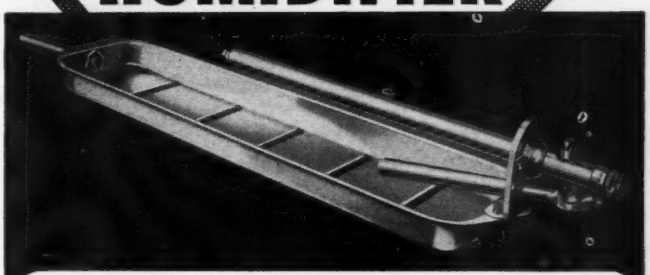
Please, no C.O.D. orders! Mail remittance with order. We pay postage.

HEATING PUBLISHERS, INC.

2 W. 45 St. New York, 36

MORE PROFITABLE TO INSTALL

THERMO-DRIP AUTOMATIC HUMIDIFIER



- VALVES DON'T LIME UP
- NO STAGNANT POOL TO REHEAT
- SUPER-SENSITIVE THERMOSTAT
- OUTSIDE SCREW ADJUSTER
- EASY INSTALLATION
- ONE KIT TO PURCHASE

Our volume sales prove it... Thermo-Drip gives furnace owners greater customer satisfacton.

Prospects easily see the advantages of humidifying by automatically dropping water on a sizzling hot stainless steel pan.

Too, it's easy to demonstrate why this method is the *most efficient, most dependable* way to put moisture in the air.

Yes—Thermo-Drip gives *faster, most efficient vaporization.*

Write today for FREE literature. Dept. FO-62

AUTOMATIC HUMIDIFIER COMPANY • Cedar Falls, Iowa

REDUCE YOUR COSTS . . . SO YOU CAN COMPETE PROFITABLY

Build your own furnaces—have exclusive features—avoid expensive research and development expense.

The National Association of Mortemp Manufacturers operates a very successful Engineering Department that develops heating products which can be manufactured economically with less than $5,000 worth of shop tools.

National Association of Mortemp Manufacturers Engineers originated "Counter-flow" furnaces in 1940—used "perimeter heating" systems in 1932—developed the popular "chimney-furnaces" for low cost homes in 1941—invented the outstanding industrial "Heat-Machines" that heat men at work, not empty spaces.

National Association of Mortemp Manufacturers supply their members with complete construction drawings, specifications, installation engineering, service material, and sales literature copy for a well rounded line of heating products that are use-tested, government acceptable, laboratory approved and have given full satisfaction to users and builders over the years.

National Association of Mortemp Manufacturers grants responsible concerns exclusive selling rights for market areas or states.

Some very good territory is still open . . . inquiries are invited.

THE NATIONAL ASSOCIATION OF MORTEMP MANUFACTURERS

Post Office Box 386 Rockville, Md.

SOOTMASTER
REPLACEMENT BAGS
FOR ALL FURNACE CLEANERS!
Made especially for cleaning oil-fired boilers and furnaces to fit every make and model vacuum cleaner.
Write for the name of your nearest distributor.
Jobber inquiries invited.
MASTER-CRAFT SUPPLY CO.
HAVERSTRAW, N. Y.
• Triple Stitched
• Leak-Proof Seams
• Specially Woven Cloth
• Guaranteed

SILENT KORTH OIL HEAT
REDUCED PRICE
SAME QUALITY
WRITE—PHONE
Call Your Order At Once — Elizabeth 4-1560
ECKHART MFG. CO., INC. UNION NEW JERSEY

. . . . Self-service Trouble-shooting

one to accompany the monthly check, the other to be kept as the customer's record of payment. No monthly invoices or statements are sent, and adjustments are made at the end of each heating season. Recently, Riker refunded $7,000 to budget customers, identified in an accompanying letter as "Pennies from heaven." Each budget customer also is afforded the opportunity to renew his budget payments on the same basis as the previous year, saving Riker the many calculations that would be required if each account's consumption and monthly payments had to be refigured.

Riker boasts almost a quarter of a century of fueloil experience, as sales manager of the New York City division of Standard Oil Co. of New York, sales manager of Lewis Coal & Oil Co., Port Washington, N. Y., and president of an affiliated company, Lewis Associates. He served during the war as a Commander in the Navy as damage control officer on "Fighting flat-tops" and returned to Lewis. In 1949 he purchased Live Heat Fuel Oil Corporation and launched Riker Oil Company, last year taking over Live Heat's burner and service organization to become one of three dealers in Nassau County for Timken Silent Automatic.

Jim Keith, who is associated with him, also saw service during the war as an artillery Major and for some time was identified with Riker in the Lewis operations.

Just getting into burner sales, Riker has set a quota of $250,000 worth of equipment sales this year, an ambitious increase over the business done by Live Heat last year. The company is a branded Cities Service outlet, operates six 2,600 gallon tank trucks from its own storage at Garden City and from substantial additional storage leased from Lewis at Port Washington. Also, Riker's trucks have access to Cities Service bulk plant at Inwood and can fill at two other exchange points in Nassau County.

The trucks are garaged at night with a full load of oil, leave the plant in the morning ready to deliver. Covering virtually all of the county, Riker's drivers, after delivering their initial truck load, can take advantage of several alternate fill points, handily located to minimize time lost in refilling. Last year the six trucks delivered 4 million gallons and Riker is convinced he can handle a substantial increase without difficulty.

The development of the Sav-A-Call self-service system is regarded as the most unique of the company's plans in that it affords the cost-conscious and even amateurishly mechanically-minded homeowner an opportunity to save money on oilburner service and makes it less likely for him to enter an unnecessary request for service if he follows the steps outlined in the system. Besides giving him a good knowledge of his heating system and its components for a nominal fee that he pays just once, the user can look forward to a number of years of almost sure savings in correcting a number of oilburner complaints.

Riker saves, too, by not being in a position of wasting the time and

McCORKLE CONTROLS
for Vaporizing Oil Burners
Satisfy dealers . . . Satisfy customers
McCorkle Controls are backed by a record of 18 years of dependable service. Dealers endorse them, because their rugged simple construction reduces service calls to a minimum. Customers appreciate them for their dependable, accurate operation.
Write today for literature and specifications to cover your particular requirements.
D. H. McCORKLE CO.
Box E, Station A • Berkeley, California

GULF

SOLAR HEAT

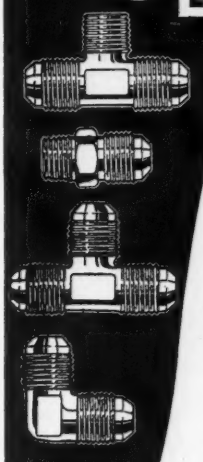
This emblem means contentment in more than a million homes.

Gulf Oil Corp. • Gulf Refining Company

SOMETHING NEW!

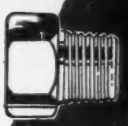
LEGGITT OIL TANK VALVE

This all brass valve with brass seat, is specially designed for direct connection between oil tank or drum and tube line to heater or furnace. One, two, or three tank hook-ups are accomplished very easily with a minimum of effort.



Always look to Leggitt for the newest in valves, filters, fittings, etc. — the BEST in BRASS at the MOST REASONABLE PRICES! Whether your order is large or small it will receive the same prompt and careful attention.

- GALVANIZED MALLEABLE IRON FITTINGS
- BRASS FITTINGS
- COPPER TUBING
- OIL FILTERS
- OIL VALVES



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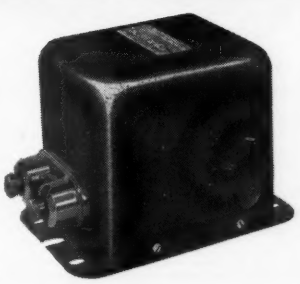
Write for catalog and prices.

SOUTHWESTERN OFFICE & WAREHOUSE
San Marcos, Texas

S. H. LEGGITT CO.
325 N. E. High St.
MARSHALL MICHIGAN

DONGAN TRANSFORMERS

THEY HAVE STOOD THE TEST OF YEARS



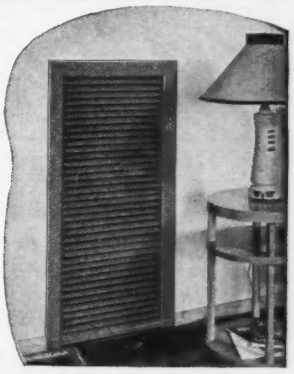
THE best testimonial to the dependability of Dongan Transformers is that they have for years been standard equipment on leading makes of oilburners. Acquaint yourself now with the Dongan's many outstanding features.

Voltages from 5,000 to 20,000.
A variety of sizes and mountings

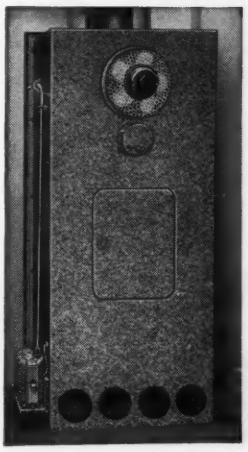
WRITE FOR Literature

Dongan Electric Manufacturing Co.
2981 Franklin Detroit 7, Mich.
"The Dongan Line Since 1909"

CASH IN ON THE SMALL HOME BUILDERS MARKET WITH



Silent Sioux



in the wall Oil Furnace

An ideal heating system for small and medium sized basementless homes. Thermostatically controlled forced circulation . . . 44,600 BTU/hr. Requires simple installation in utility room or alcove . . . all controls and access doors readily accessible. Easier to install and service than a floor furnace. For greater sales, stock up with Silent Sioux, write to:

Silent Sioux Corporation
Formerly Silent Sioux Oil Burner Corp.
Dept. FO-652 Orange City, Iowa

knowledge of his trained service men on Sav-A-Call accounts with unnecessary calls in these days of strained service manpower. The company profits perhaps even more so in having customers who can be satisfied that they will not spend money for correcting oilburner troubles except in those cases where the services of a trained mechanic are clearly needed.

With all its obvious merits the real test for Sav-A-Call will come next Fall and Winter when the first spells of cold weather are encountered. Those who have it now like it, says Riker, and those who have been told about it are enthusiastic, pointing the way for additional users. It will be interesting to see the reaction of the company and customers alike after both have experienced a complete heating season.

❖

Names in the News

(*Begins on page 6*)

accordance with the understanding under which he went to Washington 13 months ago that he would serve for a period of one year. Holmes is continuing as a consultant to the Building Materials Branch to work, as he says it "for the best interests of the defense effort and the plumbing and heating industries."

Donald G. Leslie has been appointed vice-president of plant operations, Fitzgibbons Boiler Co., Inc., New York 17, N. Y., succeeding Ray C. Malvin who resigned. He was formerly vice-president Torrington Mfg. Co., chairman, Procurement Policy Committee and a member of the Production Executive Committee of the National Production Authority.

Irwin R. Hoffman has been named president and *Joseph A. Murphy*, general manager, Associated Petroleum, Inc., Jamaica, N. Y. which has just recently been appointed distributor for Quiet Automatic Oil Burner Corp. Hoffman was for many years chief engineer for Central Petroleum Corp. Murphy, who has been with Associated for four years, will be in charge of service and installations.

M. H. Keel has been appointed manager of a newly formed advertising department for Shell Chemical Corp., New York 20, N. Y. Keel joined the advertising staff of Shell Chemical Corp. in 1948.

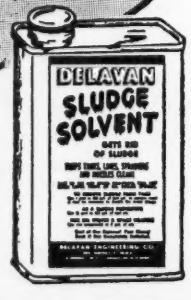
Lyman W. Childs has been named sales manager, Schirmer-Dornbirer Pump Co., Cleveland, O., manufacturers of Invader rotary pumps. Childs formerly had been a contract negotiator for the Cleveland Ordnance District, zone manager for Ford Motor Co. and district sales manager for Thompson Products, Inc.

H. Curtis Flowers has been appointed district representative for the Oil Industry Information Committee, American Petroleum Institute, N. Y. 20, N. Y., with offices in Jackson, Miss.; *John F. Campbell* has been appointed Senior District Representative of the OIIC in the Great Lakes area and *Richard F. Sheehan* has been named supervisor of advertising for the OIIC, making his headquarters in New York.

Nozzle TIPS

How To Eliminate Costly Service Calls Next Fall

DELAVAN SLUDGE SOLVENT



with summer fills . . .

DELAVAN SLUDGE SOLVENT added to every oil tank fill this summer will prevent sludge-clogged nozzles next fall. **SLUDGE SOLVENT** is 100% active. Contains NO FILLER. And, it's a good profit item, too.

Write for Bulletin 248

DELAVAN MANUFACTURING CO.
3009 SIXTH AVE., DES MOINES 13, IOWA

HIGH CAPACITY RADIATION
FOR
RESIDENTIAL
COMMERCIAL
INDUSTRIAL
Installation

COMPACT CONVECTORS

Steel or Aluminum Fins

SEE our catalog in Domestic Engineering Catalog Directory

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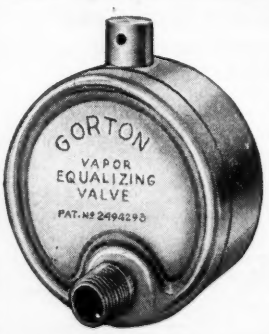
GORTON VALVES



THE SURE CURE FOR COLD RADIATORS

FAST VENTING

Write to-day for literature and prices

GORTON HEATING CORP.
Since 1887—Manufacturers of Heating Equipment
CRANFORD, NEW JERSEY

PROFIT NOW!

WITH

GRAND RAPIDS FURNACE CLEANERS

It's easy to get a lion's share of furnace cleaning profits when you use a Grand Rapids Furnace Cleaner. Greater cleaning capacity, handling ease and practically designed groups of furnace cleaning attachments help you give better service and clean more furnaces per day at a higher profit.

Act now! Write today for complete information and prices.

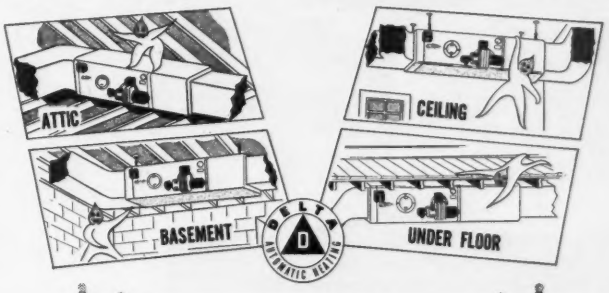
DOYLE VACUUM CLEANER CO.

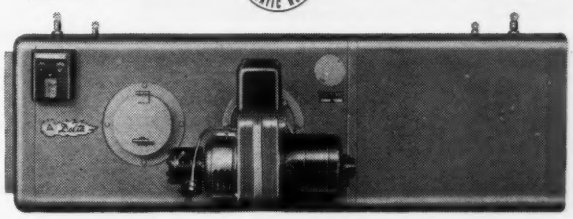
233 Stevens St., S. W. Grand Rapids 7, Michigan

SUSPENDED - SPECIAL APPLICATION

OIL FIRED - FORCED AIR FURNACE

by **DELTA HEATING CORPORATION**





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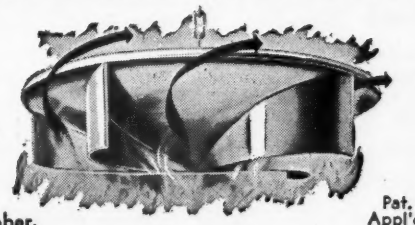

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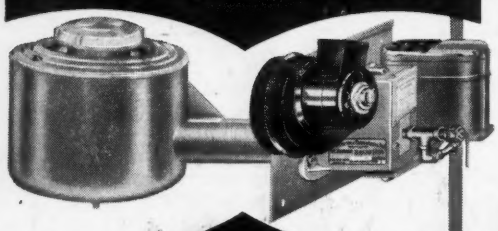

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Oilheating Trends

(*Begins on page* 12)

counts within these areas. Grouping the reports from all sections we find that for each mile of radius that the distributor works out of his bulk plant he serves 142 fueloil customers. In the New England area this figure is 178 customers to each mile radius; in Mid-Atlantic states it is 157 customers; the Midwest shows 92 customers per mile driving radius from the plant.

These figures are a good index of the relative concentration within those general regions. Many of the reporting fueloil distributors draw No. 2 oil out of more than one bulk plant. In fact, exactly half of the companies draw everything from one plant and the others use more than one pick up point. Where they use more than one bulk plant the figures given are on driving radius applied to each plant.

In checking the operating radius from the distributors bulk plant the question naturally arises about oilburner sales. Half of the reporting companies sell oilburners beyond the limits of their fueloil deliveries. The other half do not. This division naturally indicates whether or not they count on oilburner sales for substantial profit income, whether or not they bring new oil customers.

WORKING HOURS: Another question recently brought up by a fueloil marketer had to do with the practice of overtime of truck drivers at the peak winter season. The drivers of all reporting companies averaged working 9.6 hours per day during January and February this year. In other words, more companies used a ten hour day than a 9 or 8. The few distributors who misunderstood the question and gave us a weekly figure rather than daily had an average of 51 hours a week during those two months.

WEIGHTED DEGREE DAYS: The Socony index of weighted degree days for the full season to April 30 shows District 1 (East Coast) to be 8.5% warmer than normal. District II (Midwest) for the same period was 0.5% warmer than normal.

FUELOIL STOCKS: Stocks of No. 2 heating oils at refineries, terminals and in transit East of the Rockies on April 26 were 44,182,000 barrels. This compares with 35,218,000 barrels on the corresponding date in 1951. For the East Coast alone the April 26th figure this year was 17,038,000 barrels compared with 13,697,000 last year.

The API did not issue the regular weekly stock reports during the first half of May because of the strike.

DEALER COMMENTS: Typical comments on various questions of the month are these . . . "We are not sold on suspended units because we like to have both feet on the ground when servicing an oilburner" . . . "Everything points to another good year" . . . "Gas will give us only slight competition this year; oilburner installations should be good" . . . "Our driving radius for fueloil delivery depends on tank size and concentration of small tanks; 20 miles is our limit for 1000 gallon tanks" . . . "Union situation becoming more stinko; they want and will get more money, while it is hard to keep them working now" . . . "Bottom fell out of 275 gallon tank prices; 12 gauge now only $30; 550 gallon 12 gauge $60 or 7 gauge $72."

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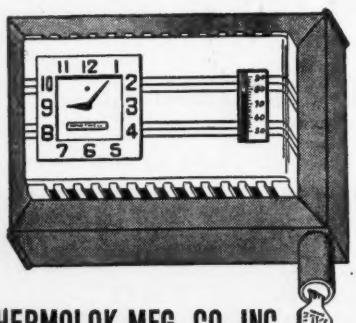

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